American Cinematographer

THE MOTION PICTURE CAMERA MAGAZINE

25¢
FOREIGN 30¢

June,
1941

New Links for the Chain Connecting Studio and Screen

These films make a difference which the average movie-goer can both see and hear. They record and reproduce sound with greater fidelity. They enhance the quality of master positives, release prints, and backgrounds for projection. Used in conjunction with fine grained Du Pont camera negatives, they transfer to the screen, more perfectly than ever before, the skill and artistry expended in motion picture production.

Du Pont Film Manufacturing Corp., New York, N. Y.

Smith & Aller, Ltd., Hollywood, Calif.

BETTER THINGS *for* BETTER LIVING *through* CHEMISTRY

NOW — THE VERSATILE *Eyemo*

Has a New "Positive" Viewfinder!

BELL & HOWELL engineers have scored again! Now the versatile Eyemo has a "positive" viewfinder and a new finder turret which mounts three matching viewfinder objectives.

With this new "positive" viewfinder, there is no masking to reduce the field. A large-size image always fills the entire finder aperture . . . for all lenses of any focal length.

In addition, this new Eyemo finder eliminates eye parallax! Even when your eye wanders from the center of the eyepiece, you still see the EXACT field to be filmed!

Add the advantage of having three matching finder objectives on a turret for instant readiness, and you begin to know why now, more than ever, the Eyemo is unsurpassed in the field of portable cameras. For no other camera offers the versatility and dependability of the Eyemo. For information about this superb 35 mm. camera, please mail coupon. Bell & Howell Company, 1848 Larchmont Ave., Chicago; 30 Rockefeller Plaza, New York; 716 N. LaBrea Ave., Hollywood; 13-14 Great Castle Street, London. *Established 1907.*

EYEMO can be equipped with 400 foot external magazine, offset turret, electric drive, and other audio accessories, or it can be stripped down to a light, compact, spring driven hand camera

PRECISION-MADE BY

BELL & HOWELL

Other Recent Eyemo Improvements

Important! Many Eyemo owners are converting their cameras to include these changes. Conversion charges are reasonable. Write for details.

NEW FLAT BASE—2½" square, with dowel holes, gives perfect seating on any flathead tripod.

LENS MOUNT LOCKING SCREWS lock each lens *in focus!*

TURRET LOCK for Eyemos with offset turret assures alignment even with long, heavy lenses.

DETACHABLE CORD now supplied with electric-drive models.

MAIL COUPON TODAY

BELL & HOWELL COMPANY AC 6-41
1848 Larchmont Ave., Chicago, Ill.
( ) Send details about new, improved Eyemos.
( ) I own Eyemo Serial No..... Am interested in converting it to include.....
.....
Name .....
Address .....
City .....*State*.....

AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 22 JUNE, 1941 No. 6

CONTENTS

Controlling Color for Dramatic Effect. .By ROUBEN MAMOULIAN 262

The Mountain Comes to Mohammed.. .... By SOL POLITO, A.S.C. 264

Sixteen Millimeter Teaches Airmen to Shoot.. .... .By REED N. HAYTHORNE, A.S.C. 266

Aces of the Camera—VI: Karl Struss, A.S.C. .... .By WALTER BLANCHARD 268

Super-XX for "Production" Camerawork By VICTOR MILNER, A.S.C. 269

A.S.C. On Parade. 270

Through the Editor's Finder. 271

Photography of the Month. 272

"Human-Interest" Shots Make the Vacation Movie .... By JOHN L. HERMANN, A.S.C., F.R.P.S., F.R.S.A. 274

Professional Hints on Getting Better Kodachrome. .... By LEONARD SMITH, A.S.C. 276

Putting Camera-Angles to Work . By PHIL TANNURA, A.S.C. 277

Tips on Tripods and Panning . By ROBERT G. MARTIN, A.S.C. 278

Scenario for a Prize-Winning Picture. . By JOHN E. WALTER 279

Shooting Summer Sports. . . By ROBERT PITTACK, A.S.C. 280

We Make a 16mm. Western...By CARL FALLBERG and LARS CALONIUS 281

Secrets of Using Telephoto Lenses. By CHARLES A. MARSHALL, A.S.C. 282

Home Movie Previews. 283

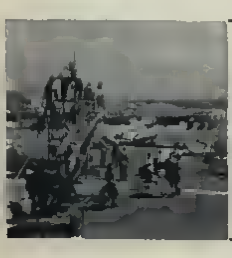
The Idea Exchange. 284

Among the Movie Clubs. 285

Here's How 288

The Showcase. 287

16mm. Business Movies 301



The Front Cover

This month's cover shows the making of an impressive scene at the North Island Navy Air Station for Warner Bros.' Technicolor "Dive Bomber," with Bert Glennon, A.S.C., as Director of Photography. Note use of Technicolor cameras on high parallels and on camera-boom. Still by Schuyler Crail.

The Staff

EDITOR
William Stull, A.S.C.

TECHNICAL EDITOR
Emery Huse A.S.C.

WASHINGTON STAFF CORRESPONDENT
Reed N. Haythorne, A.S.C.

MILITARY ADVISOR
Col. Nathan O. Levinson

CIRCULATION
Marguerite Duerr

ADVISORY EDITORIAL BOARD
Victor Milner, A.S.C.
James Van Trees, A.S.C.
Fred W. Jackman, A.S.C.
Farciot Edouart, A.S.C.
Fred Gage, A.S.C.
Dr. J. S. Watson, A.S.C.
Dr. L. A. Jones, A.S.C.
Dr. C. E. K. Mees, A.S.C.
Dr. W. B. Rayton, A.S.C.
Dr. Herbert Meyer, A.S.C.
Dr. V. B. Seuse, A.S.C.

NEW YORK REPRESENTATIVE
S. R. Cowan, 132 West 43rd Street
Chickering 4-3278 New York

AUSTRALIAN REPRESENTATIVE
McGill's, 178 Elizabeth Street, Melbourne.
Australian and New Zealand Agents

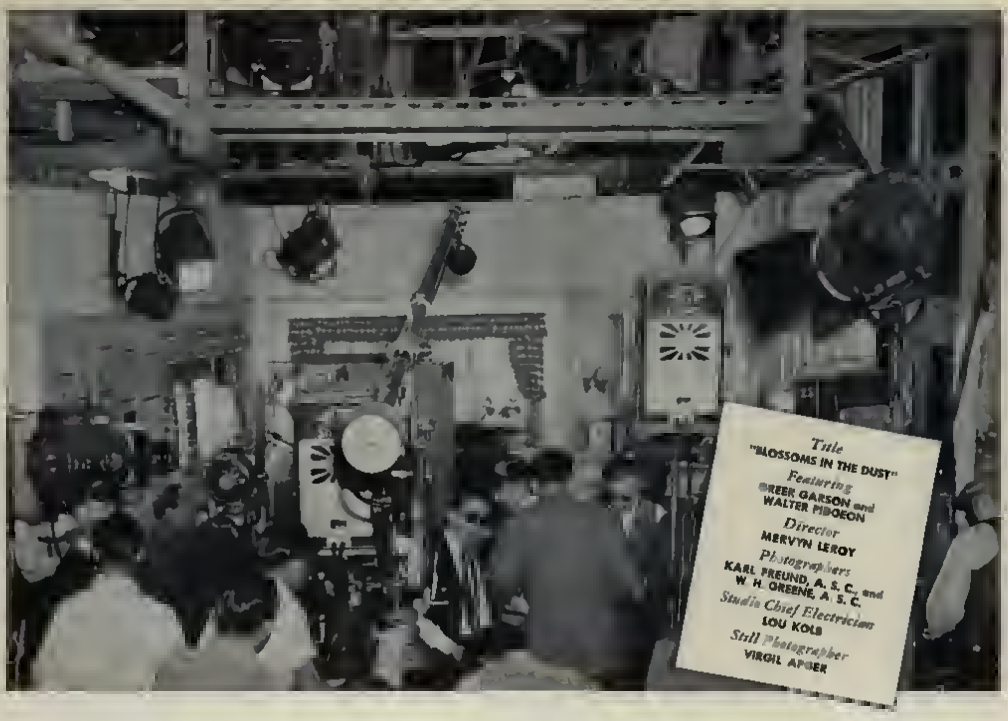
Published monthly by the American Society of Cinematographers, Inc., Fred W. Jackman, President, A. L. Gilks, Secretary-Treasurer.

Editorial and business offices
1782 North Orange Drive
Hollywood (Los Angeles), California
Telephone: GRanite 2135

Established 1920. Advertising rates on application. Subscriptions: United States and Pan-American Union $2.50 per year; Canada, $2.75 per year; Foreign, $3.50. Single copies 25c; back numbers, 35c; foreign, single copies 35c, back numbers 40c.

Copyright 1941 by American Society of Cinematographers, Inc.

Entered as second-class matter Nov. 18, 1937, at the postoffice at Los Angeles, California, under the act of March 3, 1879.



"INKIES" FOR TECHNICOLOR at M-G-M

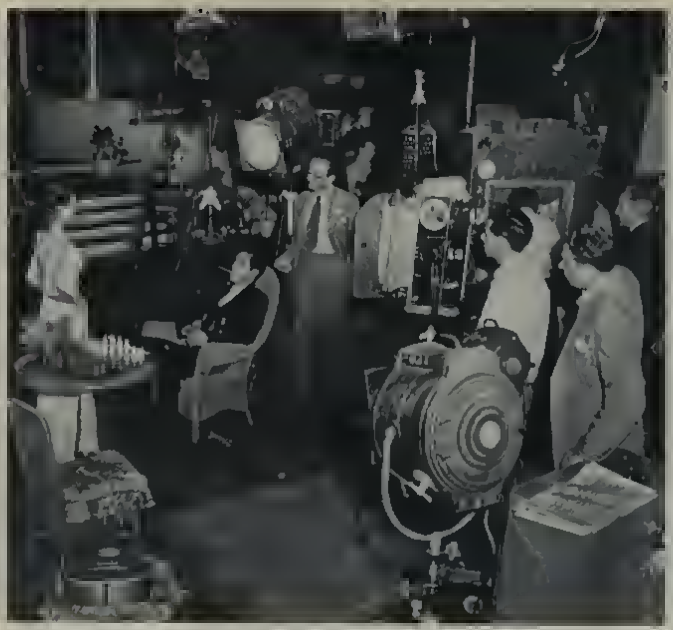
• Here's a shot of one of the sets in M-G-M's new picture, "Blossoms in the Dust," showing how M-G-M- shoots Technicolor with normal lighting techniques for sparkling effects, *using more and more G-E MAZDA lamps in inkies.*

This comhination provides great flexihility aod extreme compactoess; helps them paint with light more effectively to create the results they waot; helps them take advaotage of Techoicolor's full color aod bright-oess range; makes it easier for them to use a multitude of light sources io limited space.

With the maoy G-E MAZDA lamps for Color Photography and proper filters, the color temperature of the light can he matched right to your oeeds for better pictures.

These are only a few of the maoy advaotages which G-E MAZDA lamps offer you. Are you familiar with all their possihilities for better photography?

GENERAL ELECTRIC
MAZDA LAMPS



CONTROLLING COLOR for Dramatic Effect

By ROUBEN MAMOULIAN

FOR more than twenty years, cinematographers have varied their key of lighting in photographing black-and-white pictures to make the visual impression enhance the emotional mood of the action. We have become accustomed to a definite language of lighting: low-key effects, with sombre, heavy shadows express a sombrely dramatic mood; high-key effects, with brilliant lighting and sparkling definition, suggest a lighter mood; harsh contrasts with velvety shadows and strong highlights strike a melodramatic note.

Today we have color—a new medium, basically different in many ways from any dramatic medium previously known, whether the stage or previous black-and-white pictures. And in color, we have not only a new dimension of realism, but also a tremendously powerful means of expressing dramatic emotions. Is it not logical, therefore, to feel that it is incumbent upon all of us, as film craftsmen, to seek to evolve a photo-dramatic language of color analogous to the language of light with which we are all so familiar?

This has, at least, been my conviction since the introduction of the present Technicolor three-color process made color in its modern sense possible. It was my privilege to direct the first feature production ever made in this process, "Becky Sharp," some seven years ago. While this assignment carried with it the excitement of pioneering in a new medium, it was not altogether a satisfactory one. My own connection with the picture, it will be remembered, followed upon the tragic death of the very capable director who began it; and no creative artist, whether director or cinematographer, cares to take over an assignment that way, with inadequate preparation. Moreover, the story was, I am convinced, none too happily chosen as a vehicle for launching the color medium; many of the characters were British officers, and had necessarily to appear in scarlet uniforms: and red is the most aggressive of all colors.

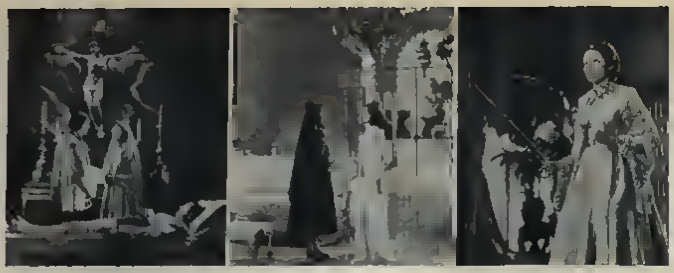
Nevertheless, I enjoyed making "Becky Sharp," and in that first pioneering effort we all of us learned valuable lessons about color and its use.

During the intervening years, the Technicolor process has made many improvements, especially in efficiency and technical smoothness. For my own part, I have tried to advance with it in my understanding of color in all its uses. Hoping for an opportunity to direct another color production, I have tried to study color from every angle—the history of color; the psychology of color; the artistic application of color as four thousand years of painters have taught it to us; and something, at least, of the scientific aspect of color as regards color in pigments and light-values. In addition, I made it my business to see each successive Technicolor production, watching with interest the work in color of directors, cinematographers and art directors.

Finally Darryl F. Zanuck of 20th Century-Fox gave me the privilege of directing a Technicolor production, "Blood and Sand." In it, with the invaluable collaboration of cinematographers Ernest Palmer, A.S.C., and Ray Rennahan, A.S.C. (my pioneer partner with "Becky Sharp"), art directors Richard Day and Joseph Wright, and of course the technical cooperation of the entire Technicolor organization, I have tried to put into practical use some of the things I have learned about color.

The first and most obvious step, as I saw it, was to develop a color-plan which would coordinate the emotional aspects of action and dialog with the physical production and with the fact of color. The coloration of the settings and costumes for each scene and sequence must be keyed to the emotional mood of that particular action in exactly the same way a cinematographer keys his lighting to match the mood of the action. In the same way, the color-treatment of each sequence must be keyed to the dominant mood of the production, and planned so that the production, when assembled, will form a dramatically and chromatically coherent whole. Above all, every detail—sets, set-dressings, props and costumes—must be carefully coordinated with this plan and with each other.

How herculean a task this is, none of us realized until we attempted it. In making a black-and-white film, we are all too accustomed to accepting a chair as a chair, so long as it is of the correct design for a given set, and of some-



Left, Color mood for the chapel scenes was drawn from the paintings of El Greco. Center, Color-contrasts in costuming heightened character contrast between Linda Darnell and Rita Hayworth. Right, the red scarf in Linda Darnell's hand heightened the dramatic effect of this scene. Below, top, Color-mood for this scene in the matadors dressing-room was inspired by Titian and Veronese; middle, the atmosphere of this sequence was inspired by Velasquez; bottom, this death scene followed the mood of the 14th century Spanish primitives

where near the correct tone of photographic gray to harmonize photographically. In Technicolor, the color, even more importantly than the form of the chair must be actively considered: it must harmonize with set and costumes both physically and psychologically. In a black-and-white scene, we can use, for example, a red-upholstered chair in reasonable confidence that its dark-gray rendition on the screen will not be objectionable. In Technicolor, that aggressively red-upholstered chair could very easily dominate not only set, but action, not merely distracting attention from the action, but very probably inducing in the audience an unanticipated, and possibly undesired emotional response, far different from the intended dramatic mood of the scene. It is the same with every smallest detail, even down to a handkerchief.

Fortunately, the story of "Blood and Sand" divides itself into six or seven clearly-defined sequences, each of which is sufficiently distinct so it can be seen to have its own specific dramatic mood, and which can be given its individual color-mood as well. The first of these is the prologue, in which the character of Juan Gallardo as a little boy—poverty-stricken but self-assured and resolved to become the greatest of matadors—is established. Then comes that depicting Gallardo, ten years later, as a rising young bull-fighter, culminating in his triumph in the Seville arena. Next comes his bedazzlement by the wealthy and worldly-wise Doña Sol. There is, too, a definitely individual mood set in the sequence in Juan's dressing-room immediately before the bull-fight. Following this, and recurring at the close of the production, are the sequences in the arena chapel. Similar, yet entirely different in mood, is the scene of El Nacional's death. Likewise, though they are related to some of the other sequences, the street and market scenes carry a distinctive flavor all their own.

Since "Blood and Sand" was a Spanish story, I was anxious to capture the authentic atmosphere of the country, not only in its literal, every-day reality, but also in its poetic essence. This atmosphere has been best expressed pictorially by the great Spanish painters. It was only fitting, therefore, that we should turn to them for inspiration.

After all, in making a motion picture, and especially a motion picture in color, we are essentially making a series of paintings. What does it matter if we are not painting our picture with water-color or oil paint, but with colored light projected on a white screen? What does it matter if our picture moves and speaks: it is still fundamentally a picture. To what better source of inspiration could we turn than to the greatest masters of painting?

Not that any of us made a slavish attempt to imitate them! That would have been fatal. We were working in a different medium, expressing different thoughts. But we could—and did—turn to them as fellow-artists who knew the country and its emotions, for guidance in expressing similar emotions in our own medium. Their use of color, proven by centuries of approval, could guide us in choosing the colors we used in expressing similar emotions, painting comparable scenes.

Therefore for the early sequences of Juan's poverty-ridden childhood, we turned to the character paintings of Murillo. He set the mood for our sequence in such paintings as his "Young Spanish Beggar;" bronze-browns and blacks dominated.

The next sequence built progressively to the bull-ring scenes. For this, and for all scenes of violent action, we followed the style of Goya, with his dramatic and vivid colorings.

The scenes in the luxurious home of Doña Sol tried to capture the essential flavor, though not the detail, of Velasquez, the great master of light and shadow, who so flashingly depicted the richness of court life.

El Greco, the outstanding religious painter of Spain, supplied the inspiration and color-mood for the sequences in the chapel.

For the death-scene of Nacional, we sought to capture the flavor in form and composition of the 14th century primitives. This treatment happens to fit not only the mood of the action, but the character of El Nacional. He was himself a primitive—a simple, unlettered man, whose dying regret was that he had never learned to read or write.

For the scenes in Juan's dressing-room, we for once turned from Spain to the Italian, and particularly the Venetian painters of the 16th century. We tried to capture something of the luxury of color and strong suggestions of bustling movement that such painters as

Titian and Veronese put on their canvases.

For the street and market scenes, we essayed to capture something of the mood of Sorolla. And as an interesting side-light, for the bull-fight posters used in the picture we used originals by Carlos Ruano Llopis, the outstanding painter of matador and corrida scenes today.

In the costuming, we tried to express something of the essential qualities of each character. For example, there was Juan's childhood sweetheart, later his wife, Carmen, played by Linda Darnell. Many of her costumes were white—uni-

(Continued on Page 288)

The Mountain Comes to Mohammed

By SOL POLITO, A.S.C.

MOTION picture production has grown so enormously during recent years, both in technical complexity and in cost, that we literally cannot afford many of the practices which only a few years ago were regarded as production commonplaces. One of the most important among these is the practice of sending large production units on extended location trips. Our producers quite naturally want to put the best possible results on the screen; but they cannot afford to send an expensive company to a distant location where photographic and recording conditions are subject not so much to the control of cinematographers and recording engineers, but to weather—and chance. Even if, from a purely budgetary standpoint, this may at times be feasible, in most instances the increasing pressure of releasing schedules renders it unwise.

For this reason there is an increasing tendency in every studio to film more and more of a picture's exterior sequences under the absolutely controllable conditions of a studio sound stage. This applies not only to scenes involving the projected background process, but to others in which such backgrounds are not necessary. In almost every studio, stage-built exteriors of a size and scope which a few years ago would have been considered incredible are now being accepted as a matter of course. In several plants new and increasingly large stages have been built or are building for this purpose.

My own studio—Warner Brothers'—is, I believe, definitely taking the lead in this direction, though I am aware that in some recent productions of other producers, including Alexander Korda's "Illusion" and Howard Hughes' "The Outlaw," some stage-built exteriors of impressive dimensions have also been used.

The starting-point of this trend was probably the filming of Warner's "Captain Blood" a few years ago. For this, the entire deck and upper works of a seventeenth century sailing-ship were built on what was then one of the studio's largest stages.

So successful was this that when last year it was decided to film "The Sea Hawk," the studio executives determined upon an even fuller use of stage-built exterior scenes. A special Marine Stage was built—the largest in Hollywood or, so far as can be learned, in the world. It covers more than two acres of ground, and measures 160 feet wide by 270 feet long, with a clear height of 85 feet from floor to roof-girders. The sunken floor of the stage forms a huge tank which can be flooded to a depth of twelve feet, requiring over a million gallons of water.

For "The Sea Hawk" two virtually complete sailing-ships were built on this stage. The smaller of them measured 135 feet in length, with masts 65 feet high, and weighed 127 tons; the larger one had a length of 165 feet and weighed 142 tons. Both ships were mounted on elaborate hydraulic rocker mechanisms which permitted them to roll and pitch both laterally and longitudinally, to duplicate the motion of an actual ship in any sort of a sea. The smaller craft was also mounted on wheels running along diagonally-placed rails in the stage floor, by means of which it could be brought alongside the other ship.

By way of a background, a huge cyclorama backing was extended almost entirely around the stage. Upon this, by means of the ripple and wave-illusion machine excellently described in the April issue of THE AMERICAN CINEMATOGRAPHER by art-directors Anton Grot and Leo Kuter, a perfect illusion of rippling waves was projected.

More recently the same stage, with the smaller ship remodeled to represent a more modern craft, served as the setting for all of the exterior scenes for "The Sea Wolf."

Most recently, in preparing to film "Sergeant York," we were faced with the choice between going actually to the Tennessee mountains (or some nearer region offering a reasonably accurate facsimile of them) or of building a suitable mountain set in the studio. Due to my success in handling the large-scale marine exteriors for "The Sea Hawk" and "The Sea Wolf" on the stage, I urged upon the studio executives that the latter course would not only prove vastly more economical of time and money but would, by placing every photographic and recording condition under absolute control, enable us to put better and more convincing effects on the screen.

The decision was finally made to film these exteriors on the stage. As a matter of fact, the results on the screen proved so satisfactory that more and more scenes, originally planned for actual exterior shooting, were re-scheduled to utilize stage-built exteriors. While there is of course no way of proving concretely the actual saving this course involved, director Howard Hawks at the conclusion of the picture estimated that the immediately accountable cash saving was not less than $25,000, and probably more. The saving in time was also considerable, for

during the period when we were making these sequences Southern California was visited by an unusually long and heavy series of rainstorms, which would have forced complete suspension of work on any actual exterior scenes.

This set is interesting from several viewpoints, and reflects great credit on the ingenuity of art-director John Hughes. It covered an area of some 135 by 250 feet, and duplicated an entire mountain valley, complete with rocky ridges and hills, 200 feet of mountain stream, and 121 pine, oak and cedar trees. A sloping, hillside field was provided, coated with an 18-inch layer of dirt deep enough to permit actual plowing, as required by the script.

One of the most spectacular features of this set was our so-called "revolving mountain." This was a 40-foot-high promontory which was mounted on a circular turntable 35 feet in diameter, and weighing in all 60 tons. By turning this mountain to different angles, we were able to get a very considerable variety of angles, for a slight change in the position of mountain or camera or both would change their entire relation to the background, and accordingly give what was for all intents and purposes a completely different "location." In addition, some ten "wild" set pieces—cliffs, mountainsides, peaks, etc. —mounted on casters so that they could be wheeled into place in any desired position, provided for yet additional angles.

The extreme distance was again provided by a cyclorama backing, against which sky and cloud effects for either day or night scenes could be projected.

Photographing scenes of this nature convincingly is primarily a matter of lighting. The problem divides itself, however, into two distinct phases. First of all, a strong source-lighting is required on the foreground, to simulate natural sunlight in day-effect scenes, and moonlight in the night-effects. Secondly, an illusion of distance must be created in the background, suggesting perhaps miles of distance, even though the actual backing is only a few feet behind the foreground set and players.

Obviously there is but one lighting tool capable of meeting the needs of foreground source-lighting on such ultra-large sets as these. That is of course the modern high-intensity arc spotlight. No other light-source has anywhere near the necessary penetrating power. Even so, it must be admitted that on such huge sets even the big 170-Ampere H.I.-Arc spotlights—the largest modern arcs available — seemed ridiculously small. There were times when it seemed that one of these powerful lamps, projecting its beam down on the set from a catwalk 150 or 200 feet distant, was hardly more powerful than a pocket flashlight!

A battery of these units, however, with their beams concentrated to a comparatively narrow, intense spot, and carefully positioned so as to parallel but not overlap each other, produced the desired effect.

As a matter of fact, I found several distinct advantages in this technique. Obviously, by having several batteries of these lamps placed along different sides of the set, I could recreate the lighting of any desired time of day—morning, noon, afternoon or evening—regardless of what the clock might actually say. We frequently found ourselves spending the morning filming scenes played in afternoon lighting and then after lunch, with the lighting re-

(Continued on Page 298)

Sixteen Millimeter TEACHES AIRMEN TO SHOOT

By REED N. HAYTHORNE, A.S.C.,
Washington Staff Correspondent

SIXTEEN millimeter is teaching U. S. Army, Navy and Marine Corps pilots and aerial gunners to shoot—and shoot straight—against the time when bullets, rather than pictures, may be the required ammunition! Aerial gunnery is something that cannot be perfected on a conventional target-range or by pot-shotting at an unmanoeuverable target-sleeve towed by another plane. If aerial gunnery is to count under actual combat conditions, it must be practiced and mastered under closely simulated combat conditions—actual dog-fights, with plane pitted against plane, diving, circling, jockeying for position with the whole wide sky as a battle-ground.

Using real guns loaded with actual bullets for this airfighting practice is obviously impractical, so American ingenuity has substituted the camera-gun—a unit identical in appearance and operation with a real machine-gun, but shooting 16mm. pictures instead of bullets. A bull's-eye scored with one of these picture-guns may not be as fatal as one scored with a bullet, but from the gunner's point of view, it is scored in exactly the same way—and when the film is developed the evidence of good marksmanship is fully as conclusive!

The most famous of these units is the Type CG-16 camera gun made by the Fairchild Aviation Corporation, which has been in use by the U. S. Military Aviation services for more than eight years, and which is also used by the air forces of twenty other nations. In appearance, size, weight and mode of operation this camera-gun is an almost perfect duplicate of the regulation Browning or Colt aircraft machine-gun, and it may be fitted in any installation which under wartime conditions would mount such weapons.

But in spite of its lethal appearance, this camera-gun is at heart a precision-built 16mm camera. Underneath the gun's dummy barrel is an f·3 lens of moderately long focus through which the actual shooting is done. This lens is locked in focus at the factory, and provides an acceptably sharp image of everything from 25 feet to infinity. The diaphragm setting is adjustable, and may be reached through a convenient, small port in the side of the gun-case; this may be done either on the ground or in the air, and because of the comparatively high speed of the lens and the high speed of the film used, good pictures are possible under a remarkably wide range of conditions.

The camera unit is mounted in the gun behind this fixed-focus lens. It appears to consist of a specially-modified "Simplex-Pockette" magazine cine-camera, minus its lens and sundry other conventional features, and of course with modifications which permit its use as a part of the gun unit. This camera unit is placed in the gun in what would be, for a conventional camera of this type, an upside-down position, in order to center its aperture in the desired position behind the lens.

Above the lens is a special time-recoeding unit consisting of a special split-second watch with two large dials—one a conventional hour-and-minute watch dial, and the other a specially large split-second dial—and a celluloid data-card upon which can be written the name of the pilot or gunner, and the date. By means of a special prism system the watch and data-card are photographed automatically at the end of each simulated burst of fire.

In use, the camera-unit is loaded in exactly the same way any ordinary Simplex camera is, with a standard Eastman-Simplex 16mm. film-magazine which may contain either negative or reversal film, super-panchromatic being of course employed. The camera-unit is then wound, and the unit is placed in the gun. The design of both camera-unit and gun-unit have been so worked out that it is impossible to put the magazine into the camera or the camera into the gun in any but the correct way, so no special photographic skill is required of either the flying gunner or the armorers and mechanics whose duty it is to load and maintain the camera-guns.

Once in the air, the pilot or gunner can forget he is manipulating a camera, for the device operates exactly in the same way as a regulation machine-gun. If it is used in a flexible gun-mount, as in the gunner's cockpit of a two-seater observation plane or bomber, the gun is equipped with double spade-type hand-grips identical with those of a standard machine-gun, and "fired" by the regulation type of trigger. It is aimed by means of a ring-type rear sight and bead front-sight identical with those used on any aerial machine-gun. If the gun is installed in a fixed mount, as in a pursuit plane, it is of course aimed by aiming the whole ship, and "fired" by means of a trigger attached to the pilot's stick; this in turn operates an electrical contact and a solenoid release.

The camera-gun normally "fires" at the standard silent-picture rate of 16 frame-exposures per second, though it can be slowed down to 12-frame speed if necessary to compensate for unusually unfavorable weather-conditions. However, with the fast lens and the superpan film used, 16-frame speed is usually adequate. To offset the atmospheric haze generally encountered in all types of aerial photography, a "minus blue" yellow filter is built into the unit.

So that the accuracy of these pictured

Frame enlargement from gun-camera film

shots can easily be determined, a small glass plate upon which is engraved a reticle system of cross-lines and concentric circles is placed directly in front of the aperture. As the illustration shows, this photographs the reticle system on each frame of film.

Photographing the watch and data-card at the end of each "burst of fire" is done automatically, as has been indicated. A prism system is dropped into place automatically in front of the lens, and the record is photographed on the last frame of film. Illumination for this is provided by four tiny flashlight-bulbs powered by three standard flashlight-cells.

Most recently, for fixed machine-gun installations in ultra-fast pursuit ships which may, like Britain's famous "Hurricanes" and "Spitfires", have as many as six or eight fixed machine-guns firing forward from positions in the wings, another special camera-gun, known as the Type W-7, has been developed. This does not look in the least like a machine-gun, though it operates in essentially the same manner as the earlier gun-camera. Instead it is a neatly streamlined aluminum housing made expressly for mounting on or even in a fighting-plane's wing. It is of course operated by remote-control, and in this installation the camera-unit appears to be mounted lying on its side; this, of course, is an unimportant detail since the essential thing in these pictures is merely the relation between the target-plane and the reticle system which indicates hits and misses.

During the eight years these camera-guns have been in use, in the course of which thousands have gone into service in this and other countries, many detail improvements have been made in the various mechanisms. Special electric heaters have been developed to prevent the extreme cold of the four-, five- and six-mile altitudes at which modern air-battles may be fought from interfering with the operation of the guns. The effect of the plane's vibration on the various parts of the gun has been studied, and wherever necessary, the parts thus affected "souped up", while a completely special, sturdy and accurate Hamilton watch mechanism has been evolved. As a result, America's camera-guns are regarded as the most unfailingly reliable units of their kind in the world.

For use in the field, a special Stinemann developing system has been made for developing the 16mm. super-speed panchromatic negative usually used with these guns. The Stinemann racks used have a capacity of 50 feet of 16mm film, so that two camera-gun "loads" may be developed at the same time. These "loads," by the way, are usually 18½ feet in length, though the full capacity of the magazine is 25 feet. The 18½-foot "load," however, is usually deemed more convenient, and it permits making more than 740 frame "shots," which is more than enough for most purposes.

Two methods of studying the camera-gun pictures are commonly employed. Since careful study of each individual shot is desired, rather than the ultra-quick "flash" that would be obtained by normal-speed cine projection of the incredibly few frames that could be shot as two 400-mile-an-hour fighting ships pass each other, individual-frame "still" viewing is preferred.

Where it is desirable to project each frame's image onto a comparatively large screen, as in classroom study or detail analysis of a gunner's shooting, a special projector has been developed by the Fairchild engineers. This is essentially a combination of the conventional miniature slide-projector with a means of carrying 50-foot reels of 16mm. film and moving it frame by frame. A compact lamphouse similar to those used in mini-slide projectors is used, with a highly efficient optical system. Since the lamp is of relatively low voltage, a given frame may be held on the screen as long as necessary. The little device will project an excellent picture up to about 30x40 inch size.

Where only one or two people may have to study a film—say the gunner and the officer in charge or the instructor—a standard Eastman 16mm. film-viewer of the non-motion type is used. This is mounted on a handy base, with a small pair of Bell & Howell rewinds which, incidentally, are mounted in an inclined position, so that there is a minimum of twisting the film in threading.

There's a very romantic story behind the introduction of these camera-guns. Back in 1932 Captain A. E. Nesbitt took the first gun to Washington, to show it to the heads of the various Service departments involved. But, as might be imagined, he found it rather embarrassing to carry it around, as it resembled a real machine-gun so closely—and despite the influence of gangster movies, carrying a full-sized machine-gun around the streets and offices of a modern American city is one of those things that simply isn't done. So he left it for some time in an office in the Navy Department.

There, quite a few officers inspected it and quite literally passed it by. But one day, an officer more far-sighted than the rest looked it over. He was Commander Forrest P. Sherman of the Navy, and in that first model he saw worthwhile possibilities. He called Capt. Nesbitt immediately, and to make a long story short, in 1933 the Navy ordered three of the guns and sent them to various stations for testing.

Top, the Fairchild gun-camera, center, inserting the camera-unit, bottom, loading the camera-unit

These first tests, while they revealed some initial "bugs," also thoroughly proved the practicability of the camera-gun idea, and of the Fairchild gun in particular. As a result, ten more were ordered, and before these were delivered, the Navy Department put in an order for 100 more. In 1934, the orders started to come in batches of 300 and more, and since then, thousands have been put into service. No figures are available, naturally, as to the number now in use or being made for use in the vastly expanded air training program of our defense forces, but it is certain that the machine-gun camera is playing a very vital role in making America and other democracies increasingly capable of self-defense in the air, and all of

(Continued on Page 290)

Karl Struss A.S.C., (second from right) making the difficult Technicolor shot described.

Aces of the Camera
VI:
KARL STRUSS, A.S.C.

By WALTER BLANCHARD

DIRECTOR of Photography Karl Struss, A.S.C., has the gift of an insatiably inquiring mind. He is never satisfied until he knows, from personal experience, the why and wherefore of things. If you tell him that a thing is impossible, or that it must be done so, because it always has been, he probably won't argue with you, but he almost certainly will devote his spare time to experimenting with the idea until, one way or the other, he has proven it to his own satisfaction.

That inquiring mind of his has been responsible for a lot of useful things in photography. More than twenty-five years ago, for example, as one of the nation's foremost commercial still photographers, Karl decided he wanted a soft-focus lens of a certain quality that lens-makers told him was impossible. Far from being discouraged, Karl tackled the problem himself, experimenting with every possible optical combination until finally he got the result he wanted—a soft-focus lens which at the same time provided a foundation of an essentially sharp image. And today, more than twenty-five years later, one of the world's most famous lens-making firms still lists the Struss Pictorial Lens among its finest products.

Later, as a U. S. Army photographer during the last war, Struss advocated the idea of using natural-color photography as a means of seeing through camouflage. His superiors were less far-sighted—but today, so we understand, aerial color-photography is one of the "latest developments" in penetrating camouflage—!

A decade ago, firmly established as one of the "greats" of the cine-camera profession, Karl felt the need of a certain type of lamp with which to get a soft, yet characterful and controllable lighting on the face of the star he was photographing. No such lamp existed then—but it does now. Karl's "Lupe," a funnel-shaped, focusing reflector carrying a tubular, 1000-Watt frosted globe and mounted on a multi-jointed arm so it can be placed in any conceivable position, has become a universally popular instrument for face lighting.

Another important cinematic development for which Struss' fondness for private photographic experimentation is responsible is the trick, used in such widely differing productions as musicals and horror films, of turning a normal-appearing make-up into blackface by means of carefully coordinated make-up and filtering. The trick, once you know of it, is simplicity itself. use a long graduated filter shading from red in one end to an absolutely complementary green at the other. Then make up your actors' faces with cosmetics which when viewed through one end of the filter—say the red end, photograph white, while through the complementary-colored green filter, they will photograph black. The amazing change is made with no more effort on the part of the camera-crew than sliding the long filter across the lens!

As a matter of fact, Karl considers a scene in his present film, Paramount's Technicolored "Aloma of the South Seas," as far more difficult than these filtered trick-shots. The scene begins with Aloma, as a child, sitting beside a lagoon and singing. The camera dollies up to her, around and down to show her reflection in the still pool. A nut drops into the pool, breaking up the reflection. When the water quiets down, Aloma, now grown to womanhood and played by Dorothy Lamour, is mirrored in the water. And to close the scene, the camera dollies back again on its previous course—up, around and back.

Doing this in synchronism to prescored music, with the lighting complications of a big stage-built exterior set, and the added physical handicap of the big and somewhat unwieldy Technicolor three-film camera made that, in Struss' estimation, the most difficult single scene in his twenty-two year career as a cinematographer.

During that career, which has run the cinematic gamut from the old-time orthochromatic "flickers" to today's Technicolor, Karl Struss has proven himself not only a technician par excellence, but one of the industry's most versatile camera-artists. He shares with Charles Rosher, A.S.C., the distinction of being

(Continued on Page 299)

Super-XX for "Production" Camerawork

By VICTOR MILNER, A.S.C.

SINCE their introduction a few years ago, ultra-fast negative films like Eastman's "Super-XX" have been generally regarded as distinctly special-purpose emulsions. Their manufacturers have been at great pains to stress this fact, pointing out that these emulsions were designed primarily to give newsreel and other cinematographers working under extremely unfavorable lighting conditions the utmost in speed, though at some sacrifice in such other qualities as grain-structure and contrast. The manufacturers and their technical experts have repeatedly stressed that they consider their so-called "production-type" emulsions, of which Eastman's "Plus-X" is typical, as being much better suited to the requirements of every-day production cinematography.

These production-type emulsions are undeniably excellent. They virtually revolutionized studio cinematography when they were introduced a few years ago, for they combined two highly desirable characteristics—high speed and fine grain-structure—in a way that had previously been considered impossible. They had at least twice the speed of the fastest emulsions previously available, while at the same time evidencing fine-grain characteristics equal or superior to those before associated only with extremely low-speed films.

But in addition to these desirable qualities, they also presented at least one which was, to say the least, less pleasing. Regardless of manufacture, all of these film products showed a very considerably increased contrast. During the first year or so that these films were in use, virtually every discussion of the subject centered around the fact that using these films demanded a radically different light-balancing technique. Highlights had to be lit much more softly than with earlier films, and even so there was a constant danger of over-lit, "washed out" highlights. Shadows required specific filler lighting if detail was to be preserved. In other words, the light-balance used to obtain any given effect had to be much flatter than any of us were accustomed to using, and the margin of inherent latitude in the film was extremely narrow.

During the past year or so, several cinematographers have experimented with the use of super-fast emulsions like "Super-XX" as a production film. Among them may be mentioned such leaders of the camera profession as Joseph Valentine, A.S.C., who pioneered the idea; Gregg Toland, A.S.C.; William Daniels, A.S.C.; and Rudy Maté, A.S.C. I have myself used this film for several recent productions.

The results certainly justify this theoretically unconventional practice. Some of the best-photographed productions of the past year have been made on "Super-XX." Among them may be mentioned "Spring Parade," with which Joseph Valentine deservedly obtained Academy Award nomination; Toland's "Citizen Kane," photographically perhaps the most discussed production of the year; Daniels' "So Ends Our Night" and "Back Street," Maté's "That Hamilton Woman!" and "Flame of New Orleans," and among my own recent releases, "The Man Who Lost Himself."

It should be clearly understood at the outset that the purpose in using this super-fast film is *not* to take advantage of its considerably increased speed. Indeed, in most instances I believe that illumination readings taken on any of the sets mentioned would indicate that the light-levels employed were little, if any, lower than the same cinematographers would employ using the conventional "production-type" films. They might in some cases even be slightly higher.

This is explained at least in part by the special laboratory treatment generally given this film when used for such purposes. As is well known, the manufacturers' instructions for handling these ultra-fast films to gain the fullest possible increase in speed call for giving the negative roughly 25% more development than the conventional "production-type" negatives. This added development builds up the maximum negative density. But it also tends to increase the grain-size.

If, on the other hand, the negative is given development shorter than that usually prescribed, while a considerable part of the extra speed is lost, the grain-size is materially reduced. As a matter of fact, those of us who have utilized "Super-XX" for production camerawork are convinced that, given this type of processing, its grain-size is little, if any behind that of such "production-type" films as "Plus-X."

The advantage we gained from using "Super-XX" for this purpose is therefore not speed, but quality. As has been pointed out, these super-speed emulsions all have a much flatter contrast than do their companion "production-type" products. Under some con-

(Continued on Page 290)

A.S.C. on Parade

Toland Tops Preview Poll

Gregg Toland's sensational "Citizen Kane" romped home an easy winner in the April Preview Poll of the Hollywood Reporter. Second place went to **Roy June, A.S.C.,** for his excellent photographic work bringing "Ziegfeld Girl" to the screen. **Rudy Maté, A.S.C.,** ran a very close third for his glamorizing lens-work on "Flame of New Orleans."

Len Smith, A.S.C., is too busy these days to take his much-deserved bows for his achievements Technicoloring "Billy the Kid." Reason is he's busy solo-piloting "Smiling Through," also in Technicolor.

•

Phil Tannura, A.S.C., is wearing a smile two sizes bigger than he is, account of a nice, new Columbia term contract. Inking that document caused a quick triple-play on the Gregory Ratoff picture, "Tonight Belongs To Us." Columbia nailed **Phil** home to do the Fred Astaire-Rita Hayworth musical, "You'll Never Get Rich." Ratoff then borrowed **Arthur Miller, A.S.C.,** to carry on for **Phil,** but a few days later Mag-sah Zanuck called **Artie** back to lens "How Green Was My Valley," T.C.F.'s big special. At last reports, **Harry Stradling, A.S.C.,** was holding the fort on the Ratoff epic.

s

Over at Paramount, **Ted Tetzlaff, A.S.C.,** seems to be making good as a director. He finished his first, "World Premiere," and immediately producer Sol Siegel assigned him to another—"Glamour Boy." What titles that man gets—!

s

Sid Hickox, A.S.C., just got back from a tour all around the eastern and southern edges of these United States in time to draw the Director of Photography assignment on Warner's "King Rubber." And they do say his previous one, "Underground," is headed for tremendous success at the box-office, thanks to certain flying foreign statesmen who made headlines while Sid was vacationing.

•

Rudy Maté, A.S.C., is lensing **Deanna Durbin's** "Almost An Angel," account of **Joe Valentine's** being tied up for retakes on "Oh Charlie," and also in urgent demand for another big pic starting coincidentally Deanna knows how to pick 'am!

s

Karl Struss, A.S.C., supported by the star of his current film, Philip Reed, won the Bing Crosby Trophy for men's doubles in Paramount's tennis tournament.

•

The recent heat-wave didn't bother **Lee Garmes, A.S.C.,** a bit. Directing the photography of Alexander Korda's "Illusions," Lee spent the hot spell working on a big snow set on which half a million pounds of ice, ground up into real snow, kept everybody cool—and dodging snowballs!

s

Ben Kline, A.S.C., over at Columbia, has charge of photographing "King of Dodge City."

•

"Citizen Kane" is terrific—and so is the publicity **Gregg Toland, A.S.C.,** is deservedly getting in such national mags. as "Life," "Popular Photography," "U.S. Camera," and others. Who said cameramen weren't news—?

s

Harry Perry, A.S.C., wondering among the Bahama Cays Technicoloring scenes for "Bahama Passage." Maybe that postcard with a Bahama postmark we got this morning was from him . . . even if it was signed Madeleine Carroll!

s

A cynic could make a nasty dig about **Bob Planck's** two latest assignments. Seems he went from photographing "A Woman's Face" to close-upping wild animals for the next Tarzanepic—! But we'll bet **Bob** could make even a hippo look glamorous.

•

Paul Eagler, A.S.C., with the ink just dry on a contract adding him to the RKO special-effects Dept. with **Vernon Walker, A.S.C.,** left hurriedly for Palm Beach, Fla., for special scenes for "The Unexpected Uncle." **Russell Metty, A.S.C.,** draws the production lensing berth on the same film

s

Speaking of RKO's special-effects crew, they, too, are receiving deep salaams—including ours—for their smoothly terrific trick-work in "Citizen Kane."

•

Jackson Rose, A.S.C., assigned to an MGM short called "Labor Savers." Personally, we think Pete Smith got the idea for that title from Jack's "American Cinematographer's Handbook," now going into its fourth edition!

•

Harold Lipstein, A.S.C., on MGM's "Race Track Story." And did you hear about the delayed "take" Max Fabian did when he got stuck with a certain film salesman's luncheon-check at the studio commissary the other day—?

s

George Folsey, A.S.C., assigned to MGM's "Keeping Married."

•

A.S.C. Past-Prexy John Arnold has a new bobby—model railroading. In that he joins **George Barnes, A.S.C., Ned Van Buren, A.S.C.,** Ye Ed, and sundry others who haven't the courage to admit their trains are bought for themselves, not for Junior!

Sol Polito, A.S.C., answering a hurry call that brought him in ahead of schedule from his vacation, wonders if there isn't something ominous in the title of his new assignment—"They Died With Their Boots On." He thinks "the" may have been cinematographers who didn't get vacations—!

s

Military note: among the A.S.C. members photographing Army Training Films this month have been **Art Lloyd, A.S.C., Walter Lundin, A.S.C., Roy Hunt, A.S.C., Ted McCord, A.S.C., Ray Binger, A.S.C.,** and others.

•

There'l be no mystery about the lensing of Edward Small's "G-Men vs. Scotland Yard." **Hal Mohr, A.S.C.,** is in charge of the cameras. It'll be a top-flight job—element'ry, my dear Watson!

s

Did you know **Bert Glennon, A.S.C.,** was solo-piloting Warner's Technicolor special, "Dive Bomber?"

s

And **John Alton, A.S.C.,** after that bang-up job on "Power Dive" for Bill Pine and Bill Thomas, signed for their next, "Forced Landing," and the untitled one following. There are two really smart producers—!

•

Lloyd Knechtel, A.S.C., handling an MGM "Romance of Celluloid" short, "A Good Story," which will be used as an advance plug for "The Yearling."

s

Billy Skall, A.S.C., in from Charleston, S. C., for Technicolor locationing for "Reap the Wild Wind."

•

Ray June, A.S.C., assigned to "The Chocolate Soldier" at MGM

s

Virge Miller, A.S.C., looks much too healthy for this one—but Boss Zanuck insists on giving him "Private Nurse." Yep—it's a picture!

s

The team of **Ernest Palmer, A.S.C.,** and **Ray Rennahan, A.S.C.,** is getting to be almost permanent. Following "Chad Hanna" they did "Blood and Sand" together, and now they're again teamed for "Belle Starr."

s

And did you see the fine article on **Karl Struss, A.S.C.,** that Will Connell had in U. S. Camera magazine?

•

Orchids to the Editor and publisher of "Esquire" for the way they always give the Director of Photography credit in their color-still spreads on current pix.

s

Jack Smith, A.S.C. gone hunting snow-scenes for the next Garbo picture. When last heard of he was heading toward Nardin, Cal., wherever that may be.

THROUGH the EDITOR'S FINDER

AMATEUR cinematographers, both individually and as they are banded together in clubs, have today an inspiring opportunity to turn their hobby to the performance of a worthwhile national service. This country has upwards of 2,000,000 men under arms in the Army, Navy and Marine corps, scattered through scores of cantonments and training posts throughout the country. Most of them are young men; many of them are away from home for the first time: all of them are hundreds, perhaps thousands of miles distant from home and families. All of them are hungry for news of the home folks. Conversely, the folks at home are just as anxious for anything that will tell them their loved ones in uniform are well and happy.

And what more graphic way of conveying this news is there than through 16mm. and 8mm. movies? What more worthwhile service could amateur movie-makers perform than making these films which can bring the home town to the soldier, and the soldier to his home folks?

And it can be done! Despite the obvious restrictions imposed on photography within military areas, we are convinced that all of our military and naval commanders will afford full cooperation to bona-fide cineamateurs seeking to perform such a service for the men in their commands and for their families.

Evidence of this is furnished by what Mrs. Mildred Caldwell, President of the active Long Beach (California) Cinema Club has already accomplished. Mrs. Caldwell knew that there were several thousand boys from the Long Beach area in the Army and Navy posts in Hawaii. So she took her vacation in Honolulu, taking with her 8mm. cine-camera and projector, and a bounteous supply of film. To make a long story short, she found it possible to show the men in the Long Beach contingent movies that brought Long Beach and their home folks to them across fifteen hundred miles of ocean, and to expose and bring back with her nearly 2,000 8mm feet of film by means of which she is showing the wives, mothers and families of Long Beach's service men that their loved ones are well and happy.

What Mrs. Caldwell did, others can do, too. If they work together, they can do even more than she could alone. Individuals and clubs in the home towns can film pictures of the home folks and home-town scenes. Other individuals and clubs living near the camps can make arrangements for showing these films to the soldiers or sailors from that area, and in turn film scenes of these men which can be sent back to the home-town filmers for showing to the folks at home.

We'd like to see a plan like this put into effect on a nation-wide scale. We know the amateur filmers of America well enough to be confident they could carry it out with distinction. And to that end we pledge the fullest cooperation of THE AMERICAN CINEMATOGRAPHER in serving as a central clearing-house for films, contacts and information for carrying out such a plan, if our readers should agree that it is worth putting into operation.

a

REPEATEDLY in conversations with cinematographers whose work takes them frequently from one studio to another, we've heard them say, "I could work that way at the X— studio, but I wouldn't dare try it on the Y— lot, or if my negative was going through the Z— laboratory." It makes one wonder why there is not more uniformity in laboratory methods, especially as regards negative processing. Not that we're urging absolute, cut-and-dried standardization! That would in all probability tend to stifle improvement, forcing the progressive laboratory chief to hold his hand until the least fortunate of his fellows could or would follow suit.

But a closer uniformity would, it seems, be of tremendous advantage to all concerned. As we see it, in the processing of motion picture film we are dealing with one of the most truly scientific phases of cinematography. To reproduce on the screen what the camera sees, there should, technically speaking, be but one really correct degree of negative density and contrast, and but one right density for the print made from that negative. And yet, time and again it has been proven by practical tests that if you take a thousand feet of identically-exposed film, break it up into shorter lengths and send one strip to each major laboratory, some plants will give you two or three times the density others obtain from the same exposure, and some plants will return you a print that is marred by extreme "soot-and-whitewash" contrast, while others may give you a muddily soft, flat print, and yet others one that seems ideal in every respect.

Of course we realize each laboratory and its chief has its own definite ideas as to processing methods and standards, and as to what constitutes an ideal negative and print. But in the face of so much variation, we wonder if this individualism isn't being a trifle overdone. A cinematographer going from one studio to another must either waste time familiarizing himself with that plant's laboratory conditions by tests, or waste film, time and money learning the same things during the first shooting days of a production. Sometimes he must learn virtually a new lighting balance to suit his work to the way his film is handled.

A closer approach to uniformity, it seems to us, would minimize these troubles. It would save the industry valuable time, effort and money being wasted under the present system. And, carried out with the skill and intelligence of which our laboratory chiefs and their crews are capable, it should take us a useful step forward toward our aim of putting better pictures on the screen, and doing it more efficiently.

a

THE other day, we hear, one of our leading directors of photography went to his studio chief and asked for a chance to direct. The producer, after listening patiently to the cinematographer's outline of his qualifications, replied, "That's all right, my friend. I know you'd make a fine director. But you're far more valuable to me as you are. We can take almost anyone and make him into a passable director: but we can't duplicate your unique technical and artistic skill. We're satisfied to let almost anyone direct—as long as we can have you and other A.S.C. men of your calibre behind the cameras."

In many ways, that is as fine a professional compliment as anyone could desire. It is in many ways true; repeatedly we see untrained, inexperienced men put to directing, bolstered by being teamed with experienced cinematographers who may be relied upon to keep things going properly.

But in other ways, that same compliment is a complete mis-statement. If "anyone" can direct, why do our most business-wise producers pay premium prices to have their most important films directed by experienced directors like Cecil De Mille, Clarence Brown, Rouben Mamoulian, Raoul Walsh, Sam Wood, and the like? For that matter, if "anyone" can direct, can't a man who has spent twenty or thirty years working with dozens of great directors, and propping up as many or more novice directors, do a better, more efficient job?

As to replacements, we admit pridefully that the skill and experience of any of today's outstanding directors of photography are unique assets. But the industry has more of these experienced men than it can find work for—to say nothing of a group of alert, capable young operative cinematographers ripe and ready for promotion. So our answer to the producer in question, and to his fellows, is this: today's reduced markets clamor for more efficient production, capable of putting more picture on the screen for less cost. In today's directors of photography, you have an untapped source of trained director-material capable of doing just that, so why not let today's senior directors of photography pilot your pictures? Rest assured, photographic quality won't suffer—and you'll get better pictures, more efficiently and economically made, than ever before!

PHOTOGRAPHY OF THE MONTH

BLOOD AND SAND

20th Century-Fox Production (Technicolor)

Directors of Photography: **Ernest Palmer, A.S.C., and Ray Rennahan, A.S.C.**

Comparisons between the silent and sound versions of "Blood and Sand" are inevitable. To thousands of people the title brings back memories of the silent-picture version of 1922—one of Rudolph Valentino's best-remembered successes and one of the most beautifully-presented films of the silent era. It is a pleasure to report, therefore, that the 1941 version shows clearly how far every department of production has progressed in these nineteen years. Memories or no memories, 1941 has made a far better picture of "Blood and Sand" than 1922 did—or could.

From the photographic point of view the two versions, while in most ways utterly beyond comparison, have at least one thing in common: both must take rank among the top photographic achievements of their time. Alvin Wyckoff, A.S.C., gave the earlier production some of the finest cinematography known in 1922; Ernest Palmer, A.S.C., and Ray Rennahan, A.S.C., have given the current version a Technicolor mounting which must inevitably rank high among the finest Technicolor achievements 1941 will produce.

But between the ortho-film monochromed version of the past and today's glowing Technicolor, there is an incredible difference. One was at best a pale shadow of reality; the other is reality itself, painted with the sensitive brush of a great artist.

A great deal has been said and written about what color could do in painting emotional and dramatic moods. In "Blood and Sand," Palmer and Rennahan, ably abetted by Director Rouben Mamoulian, Technicolor Director Natalie Kalmus and her staff, and Art Directors Richard Day and Joseph Wright, have made color an integral part of the story and its telling. Not that they've done it with any obvious attempt at chromatic symbolism such as has in the past made other color films seem "arty" and unreal. They have kept reality well to the fore, but have at the same time kept the chromatic key of the picture subtly attuned to the dramatic mood of each scene and sequence. And they've done it as naturally and smoothly as a monochrome cinematographer's parallel trick of suiting the visual key of his lighting to coordinate with the dramatic requirements of scene and sequence. To this reviewer's mind, it is a technique which must ultimately become as completely a part of good color cinematography as is the use of lighting to create visual moods in monochrome.

In "Blood and Sand" these two photodramatic techniques are used side by side, to impressive effect. In a good monochrome treatment, such sequences as the introduction which shows "Gallardo's" poverty-stricken childhood and unconquerable determination to become the world's greatest matador — which we sense can lead only to ultimate tragedy—would inevitably be presented in a sombre key. In this understandingly Technicolored version, it is presented not only in a low visual key, but in sombre colorings. In the same way, the sequences showing his success would be presented in a higher key; here they are given the added touch of lighter colors. In monochrome, the sequences in which the bedazzled bullfighter succumbs to the wiles of the glamorous "Doña Sol" would be given lightings tending to enhance the lush textural values of sets and costumes, with stronger tonal contrasts (as differentiated from lighting contrasts) to heighten the mood. This treatment is used in the color presentation, infinitely heightened by the use of brighter—often arresting — color - combinations and contrasts. And in the final sequences of "Gallardo's" decline and death, sombre, low-key treatment would be increasingly used; and here again this treatment is made more effectively foreboding by the combination of low-key lighting and sombre coloring.

The way in which this treatment is applied to costuming enhances the characterizations of the players—especially Rita Hayworth's "Doña Sol," in which voluptuous appeal is definitely heightened by the use of warm colors and particularly good rendition of flesh tones —is worthy of comment. If the present "Blood and Sand" seems more vibrant with life than its predecessor, this intelligent use of color must be given fully half the credit.

Lighting and composition in this Technicolored "Blood and Sand" are of the highest order. Merely to single one scene or sequence out for especial mention would be to do an injustice to a picture every inch of which seems an exciting example of camera pictorialism. What Palmer and Rennahan have done should be seen—and studied. The night-effect sequences, beginning with the film's introduction and extending through various other sequences, are notable. So, too, are the exteriors, especially when it is considered how artfully they are handled to fit into the film's visual moods. There are also some excellent projected-background process scenes.

The work of Director Rouben Mamoulian deserves praise, too. He is, as always, one of the few directors who seems fully aware of the possibilities of the camera; repeatedly he makes brilliant use of the visual in story-telling, as, for example, in the scene in the cafe in which "Doña Sol" transfers her attention from "Gallardo" to his successor. And his handling of the bull-fight sequence is such as will bring home the genuine thrill of this sport to even a non-Latin audience. We're no judge of bull-fighting form, but this picture, we believe, is the first to capture in any way the grace, daring and pageantry which have made bull-fighting the favorite sport of Spain and the Spanish-American nations, and do it in a way even a Nordic can appreciate. As such it should be a constructive step in cementing Pan-American relations.

The make-up in "Blood and Sand" is excellent, and represents a distinct advance over the make-up in previous Technicolor films from the same studio. The print previewed is also a very great credit to the Technicolor laboratory. And to those interested in the enhancing effect of fine musical backgrounds, the musical score of Alfred Newman can be whole-heartedly recommended.

SHE KNEW ALL THE ANSWERS

Columbia Production.

Director of Photography: **Henry Freulich, A.S.C.**

Henry Freulich, A.S.C., has done a highly pleasing job of photography in bringing this diverting little picture to the screen. He has a wide range of settings and action to cover—from a small-town filling-station to a conservative Wall St. brokerage office to Coney Island to swank apartments—and he has handled every scene excellently. What is more he has, in spite of the somewhat limiting atmosphere of light comedy, given the picture a great deal of highly pictorial photography.

Freulich's treatment of his principals and their backgrounds is excellent. He keeps the players—especially Joan Bennett—looking uniformly their best, and brings out every bit of production value offered by the settings. The effect on the screen is definitely rich, with fine pictorial values, yet never for a moment does he let camera pictorialism interfere with the visual comedy and swift tempo of the production.

Technically, he has had quite a number of problems which he handled very well. A rather considerable number of backings were used, and in general they are made more than ordinarily convincing. The closing sequences require a good deal of double-exposure camera-work, in which the consciences of the principals appear as visible alter egos, and carry on a considerable dialog with their actual selves. He accomplishes these trick-shots very skillfully; all too often scenes of this nature have been marred by looking too obviously a photographic trick; here they do not seem to interfere at all with the normal, excellent photographic quality of the film.

There are also two or three excellent montages which deserve special commendation.

But unless the release-prints of this production are of better quality than the preview-print reviewed, the real quality of Freulich's achievement is not going to be apparent to the average paying audience. We've seen many an indifferent print previewed, but seldom one as bad as this. There is hardly an honest middle-tone in the whole picture—only extreme whites and extreme blacks. This tends to impair the facial rendition of the players, and to distort Freulich's work in almost every scene. It "washes out" many of the backings, making it seem almost as though they had been illuminated too strongly. Yet to the practiced eye, it is obvious that this was not the case. Freulich has done a really excellent job of lighting all the way through. His set-lightings appear to be well balanced and pictorially effective, and his personal lighting of the people models them excellently. But his efforts have been crucified in the laboratory. Frankly, we'd like to see a better print of "She Knew All the Answers;" in fact, we'd even be willing to settle for a good print! We're confident it would show Freulich's work as on a par with that seen in any comparable picture of recent months, and probably better than most.

BILLY THE KID

Metro-Goldwyn-Mayer Production (Technicolor).

Directors of Photography: **Leonard Smith, A.S.C., and William V. Skall, A.S.C.**

"Billy the Kid" is, in its best parts, probably the finest example of Technicolor exterior photography that has yet reached the screen. Many of its location scenes, expertly Technicolored by cinematographers Leonard Smith, A.S.C., and William Skall, A.S.C., can only be described by the hackneyed phrase, "breathtakingly beautiful." Between the spectacular locations and the artistic skill of the co-directors of photography, the camera has captured scene after scene of incredible beauty.

It must be admitted, however, that the picture, at least in the preview print seen by this reviewer, does not at all times measure up to these best scenes. There are repeated inconsistencies in definition when, for no apparently logical photodramatic reason, the visual quality changes—sometimes between sequences, sometimes within a sequence—from definite and none too pleasant diffusion to a crisp definition which not only is more pleasing, but decidedly better suited to the vigorous action of the story. These changes are so abrupt that one gains the impression that the various parts of the picture were photographed by two different men with radically different conceptions. In fairness to all concerned, however, it must be admitted that while the variations mentioned could come in the photographing, they could also arise in various stages of the somewhat intricate process of Technicolor print-making. In the latter case, of course, they will probably be eliminated from the release-prints.

After seeing "Blood and Sand" but a few days before, this film's lack of chromatic coherence cannot but be regarded as something of a flaw. Repeatedly there are direct cuts or lap-dissolves from lamplit and other scenes in predominantly warm tones to night-effect scenes played dominantly in cold tones. There is, too, at times a feeling that the dominant chromatic value of a scene is jarringly out-of-key with its emotional content.

But the film's merits far outweigh these shortcomings. Too much praise can hardly be heaped upon the eye-filling beauty of the location scenes. This is particularly true of those in the latter half of the picture; from the moment the ranchers start their ride into town, the film's pictorial value builds progressively, and Smith and Skall give us scene after scene of haunting loveliness. In a film less vigorously written, directed and played, this abundance of beauty might be a weakening note, but here it provides an effectively contrasting background to the virile action.

Inevitably, the average observer will leave the theatre more conscious of the spectacular exterior scenes than of its interiors, but these latter are none the less among the film's most commendable points. Many of these interiors are strong effect-lightings, and they are brilliantly handled. This is especially true of the character-lightings given Robert Taylor, which does a great deal to add to the menacing aspects of his desperado role. One could wish, however, that either the cinematographers or the make-up staff had given him cleaner facial tones. The facial rendition of the other players—especially leading lady Mary Howard and Brian Donlevy, is excellent.

The film's many exterior night-effects deserve praise, though in one or two the blue moonlight effect—especially in some in which it is contrasted with lamplight from within buildings—is a bit overplayed.

The matte-shots, which are credited to Warren Newcombe, rate high among the finest we've seen lately, and the operative camerawork of Operative Cinematographer Charles Salerno and his associates, both in the many running inserts and the equally numerous follow shots, is particularly noteworthy. So, too, are the many large-screen projected-background process-shots. Many of these required unusually large screens, and were beautifully handled. The excellence of these shots added materially to the value of the film.

SHINING VICTORY

Warner Bros.' Production

Director of Photography: **James Wong Howe, A.S.C.**

"Shining Victory" offers Director of Photography James Wong Howe, A.S.C., far greater opportunities for imaginative cinematography than did his previous release, "Strawberry Blonde." It is a picture which definitely calls for the style of imaginative, sympathetically-keyed camerawork and lighting which is so strongly Howe's forte. And he delivers in outstanding fashion.

"Shining Victory" presents some of the most interesting compositions and camera-angles we've seen in some time. Not that it is a second "Variety," and full of studied attempts at bizarre angles; it isn't: but throughout the picture, Howe takes advantage of every opportunity to make what might be ordinary shots more arresting and dramatically effective by shooting from angles slightly different from what might be expected for the same shot, conventionally treated. Inevitably this picture will bring forth comment that it is directorially "different" but without any intention of detracting from director Irving Rapper's excellent job, we must point out that a great part of this aura of "differentness" comes from Howe's intelligent use of camera-angles and compositions that make so many scenes visually "different."

His lightings are, as always, well worth careful study. He presents feminine star Geraldine Fitzgerald most effectively; and the rest of the cast are, almost without exception, presented in extremely praiseworthy character lightings which build to excellent dramatic effect. But these lightings are done far more deftly than the term "character lighting" usually implies. They are but a slight shade away from straightforward lightings, accentuated just enough to sketch the character portrayed, whether masculine or feminine, against the physical and dramatic background of the action.

Howe's set-lightings are interesting. He has been given the advantage of highly pictorial sets, which are a great credit to Art Director Carl Jules Weyl. And Howe's photographic treatment of these sets brings out every bit of dramatic atmosphere the designer put into them.

All told, "Shining Victory" is well worth seeing from the photographic viewpoint, as well as the dramatic, and Howe has made it especially a study in the dramatic use of photographic composition.

LOVE CRAZY

M-G-M Production.

Director of Photography: **Ray June, A.S.C.**

When you speak of standardized mass production, you can refer to "flivvers"—or to Packards. "Love Crazy," photographically speaking, is one of M-G-M's standardized Packards. Turned out on what we would imagine to be, for an "A" picture, something of a mass-production schedule, it's not by any means an example of the best work of which Ray June, A.S.C., is capable; but it is a beautifully efficient example of con-

(Continued on Page 292)

"Human-Interest" Shots Make The Vacation Movie

By John L. Herrmann, A.S.C., F.R.P.S., F.R.S.A.

WHICH would you rather see—a series of picture-postcards, or a professionally-made news-movie of the same place? Of course you'd prefer the movie! Then—why inflict picture-postcard movies on your friends under the delusion you're showing vacation *movies?*

We all know plenty of amateur filmers who do just that, too. They take their cine-cameras on their vacations—and bring back a series of lovely picture-postcard views, with no more motion to them than can be obtained by unsteadily panning the camera, or maybe a shot or two of city traffic, seaside surf, or the like. But in general, their films are one scenic still-picture after another, until you wonder why in the world they used a movie camera at all.

Now scenic views are all right in their place. But it takes more than scenery to make a good vacation movie. To me, as a professional news cinematographer, the primary interest in any film must inevitably be what it shows of interesting people, doing interesting things. Get those people against an interesting background, and you'll lift an ordinary scenic shot clear out of the picture-postcard class, and transform it into something any audience will want to see!

For example, the geysers in Yellowstone have been spouting for at least two million years. And since the birth of amateur photography and movie-making, they've been photographed many more than two million times. But—get a shot of a pretty girl looking at those geysers, and you've added a touch of human-interest appeal that will give the shot a new interest to the most jaded audience. Make a collection of similar shots, showing your pretty girl against the various other features of Yellowstone—the falls, the paint-pots, the boiling mud-springs, the bears, and so on—and you'll have developed a continuity which will make your audience feel they've been taken on a personally-conducted tour of Yellowstone.

That's one of the first and most important things a professional newsreel or travel-film cameraman has hammered into his head by that hard-boiled breed of men known as newsreel editors. Day in and day out they tell you, "Put the human-interest touches into your pictures!" And after you've missed connecting with a pay-check once or twice because you turned in shots of scenery and what you, at least, thought was lovely photography, but minus those necessary "human-interest" touches, believe me, you learn to look for human-interest in any camera assignment! What's more, you learn to find it in almost any subject, too. You have to if you enjoy eating!

Fortunately, 16mm. and 8mm. movie-making doesn't have quite such a direct connection with most folks' daily bread and cheese: but if human-interest touches are a sure bet to please the paying audience of a professional travel-film, they're just as sure to please the non-paying audience of the personal vacation-movie. And when you come right down to cases, whether you make movies for money or for fun, the real incentive is making pictures other people can see and enjoy.

A professional news-filmer speedily learns that there are three things which, if they can be brought into his picture, are sure to make it click with any editor and any audience. Perhaps the first of these is a pretty girl. If you can get a pretty girl into your shot, showing off the scene or object or action that's ostensibly the center of interest—or even merely admiring it—swell! If you can find an excuse for having her clad in a sport outfit, a sun-suit or a bathing-suit, revealing an intriguing amount of shapely epidermis, so much the better! That's why we see so many fashion-parades and bathing-beauty contests in the newsreels. And a subject like the completion of the first tank from

a new armament factory may be of topical interest in these stirring days—but if we can add to the usual collection of distinguished military and other officials a pretty girl "christening" the new monster—well, audiences will enjoy it a whole lot more!

Staging a virtual photofinish with the glorified gals as sure-fire human-interest injectors are shots of babies. It's axiomatic with newsreel and newspicture editors that a baby is always cute—and interesting to audiences. Probably that's one reason why politicians make so much of babies just before election time! Seriously, though, babies are so unselfconscious that almost anything you picture them doing will be cute. Just set up your camera and start shooting. they'll do the directing, and the result will have a universal appeal to any audience.

Trailing a very close third come animals. Young ones for preference, but animals, anyhow. People have told me that to them some of the most memorable shots in the picture I made in the Antarctic as official cinematographer for Admiral Byrd's second expedition to Little America weren't the really significant ones showing what the explorers really accomplished, but the "human-interest" shots my newsreel training wouldn't let me miss—shots of the expedition's sled-dogs and their pups, of the seals, and of the ever-amusing penguins.

Now, these ideas can be put to useful work in making personal 16mm and 8mm. vacation movies, too. But it takes something a bit better than spur-of-the-moment snap-shooting to do it.

The first step is to have a reasonably definite plan of what you're going to shoot. If you're going to have an urban vacation, making a visit to New York, Hollywood, Montreal or New Orleans the high spot of your vacation, you can in advance plan on one kind of a picture. If you're going to take in the National Parks, it'll be a very different type of film. If you're going to some seaside or lake resort, or to the country, or summering on a western Dude Ranch, it will be something else again. If the place you go to is the main thing, you'll be wise to plan to concentrate your efforts on that; if what you do there is most important, concentrate on that; and if the manner of getting there—as in a vacation spent hiking or mountain-climbing—is the dramatic highlight, there's the key to your film.

But in any of these vacation-picture types, plan for a definite continuity. Plan to show, if you possibly can, someone actually doing all these things, seeing all these places, *in front of your lens!*

Most of us are lucky in that we usually take our vacations with the family or with a group of friends. Of course, if you're a bachelor, and travelling strictly solo, you'll have to depend on chance-met acquaintances to provide the livening human touches in your films. But otherwise, well, there's wife (or hubby, if you're one of the growing army of lady filmers!) Show her going through your picture, seeing and doing the things you want to show to your audience. If you're lucky enough to be accompanied by a pretty daughter or a good-looking son, maybe they can be persuaded to take the starring role in your film. When you have reason for a scenic or pictorial shot of the scenery, of New York's skyline, and the like, show them looking at it, and then cut to your scenic shot.

Pretty girls—children—animals—will liven up any vacation film. Picture on opposite page photographed on Agfa film, photo above, courtesy Paramount

Don't forget, either, to make occasional opportunities for getting yourself into the picture! Sometimes you can have another member of the party shoot you; sometimes you may have to set the camera on its tripod, lock the automatic release, and let the camera take care of itself while you get into the scene with the rest of the family. Sometimes you may be lucky enough to encounter a fellow-vacationer with a camera that takes the same width film as yours, who will accommodate by shooting a scene in which you're shown busily working your own cinebox! Offer to reciprocate with him, and you'll be assured of cooperation in most instances.

And if your family is of a tenderer age, you can still use this same technique. I've seen some excellent vacation-pictures built around the youngsters. Instead of "My Trip to the Mountains," plan to make your film "Mary Ellen (or Junior!) Goes to the Mountains." If you carry that idea out completely, intercutting the scenery with close shots of the activities your particular youngster found interesting—his or her part in camping, riding the ponies, bathing in the lake, maybe catching a fish or helping Daddy do it—you'll have a film that's worlds more interesting to you *and* to the audience than any cut-and-dried scenic!

There are plenty of ways you can bring in the "human-interest" appeal of animals. If your film is built around wife, daughter or youngsters, you can show them with whatever animals you may encounter—milking the cows, feeding calves or chickens in the country—saddling horses, petting colts or trying to catch a calf on a Dude Ranch—feeding the deer and chipmunks in Yosemite, and so on.

(Continued on Page 292)

A three-quarter cross-lighting, like that in this shot of Glacier Park's Going-to-the-sun Mountain, is best for Kodachrome.

PROFESSIONAL HINTS ON
Getting Better Kodachrome

By LEONARD SMITH, A.S.C.

DURING the past few years I have shot thousands of feet of 16mm. Kodachrome, not only as a hobby, but as part of my job. Out at the Metro-Goldwyn-Mayer Studios we've been making an increasing number of Technicolor productions; and we've found that we can save a great deal of time, trouble and money by making tests and scouting locations with 16mm. Kodachrome instead of 35mm Technicolor. A good share of this work has fallen to me, and it occurs to me that some of the things I've learned about Kodachrome while renging the country with a 16mm. camera looking for studio locations may be helpful to amateurs planning to take 8mm. and 16mm. Kodachrome on their vacations.

In color, as in black-and-white, the basic technical essentials of a good shot are exposure, lighting and composition. Get these right, and your shot is almost bound to be right. Miss badly on any one of them, and your shot will at best be only second-rate.

Of the three, exposure is the most important in color. It's a common saying that Kodachrome exposure must be "right on the nose:" but that, like Jimmy Durante's schnozzle, takes in a lot of territory. In Kodachrome, underexposure is definitely bad. It exaggerates the coloring—especially the red tones—and exaggerates your contrasts, as well; shadows go an impenetrable, inky black. A technically correct exposure is a lot better, but even this tends to colors that are more glaring than we usually see in nature.

For my money, I'll take a definitely full exposure—not an overexposure, by any means, but a definitely ample one, which gives plenty of light in all important shadows, and just the slightest of overexposure in the highlights. This will give you softer colorings which are more like nature, and, in general, a more pleasing picture.

Getting this full exposure is an easy matter if you use a meter. You can make your meter give it to you almost automatically if you use the instrument rightly. But I've noticed that all too many of the amateurs I've met in my travels use their meters in too strict a copybook fashion. The instruction-sheet says use a speed-setting of Weston 8 for Kodachrome—so Weston 8 it is, without ever a thought of trying something else, to see if it might give better results.

Personally, when shooting Kodachrome according to a Weston meter, I greatly prefer to use a speed one or two points *lower* than the published rating; say 6, or even 5. This will give that slightly full exposure you want for the most natural results, at the same time eliminating guesswork, and keeping your exposures consistent. But since each individual's tastes and meter-using methods differ, I'd suggest making a few simple tests before starting out. Pick two or three typical shots—a landscape, perhaps, and both long-shots and close-ups of people. Make several "takes" of each shot, each with a different meter-setting: you might begin with 8, then 6, then 5, and even 4. Use up a 50-foot roll on these tests, and when you see the result on the screen you'll be able to decide immediately which setting gives you the color pictures you like best.

Where there are people in the shot, the way you use your meter is doubly important. Come close enough to your subject so you can take your reading on the face—and if it isn't flat-lit, on the shadow-side. This way you'll preserve the "open" shadows that are so desirable.

In lighting Kodachrome exteriors, you can take one of two courses. The instruction-books say to use a flat front-light—that is, with the sun at your back. This is the safe course. My own preference is for a three-quarter cross-light, with the sun behind the camera and just a little bit to one side or the other. This, for either landscapes

(Continued on Page 292)

Top, left, extreme long-shot, right, long-shot, below, in descending order, medium-shot or "two shot," same, "cheating" with girl a foot nearer camera than man close-up. Bottom, note different effects of shooting down and up at the same girl.

Putting Camera-Angles to Work

By PHIL TANNURA, A.S.C.

CAMERA-ANGLES, I think, are among the most maligned and misunderstood phases of moviemaking. Ever since the memorable silent picture "Variety" set all Hollywood talking about the amazing angle-shots Karl Freund, A.S.C., put into it so many years ago, "camera-angles" have to most people meant shots made with the camera in some unusual and usually illogical position—unusually low, or high, or at least tipped wildly to one side or the other.

But as a matter of fact, the subject of camera-angles is something of down-to-earth importance for all of us, professional or amateur, even though we'd frown disapprovingly at the very idea of tilting the camera to some irrational slant.

The term "camera-angle," in its most literal sense, means the angle at which the camera views the subject. It *can* mean a slanted or otherwise "arty" angular inclination—but it can also mean the angle of view included in an otherwise straightforward shot; whether the camera shows all of the subject, as in a long-shot, or just a part of it, as in, say, a close-up.

In fact, this sort of camera-angling is one of the basic facts of movie-making, and one of the most important, too. The most obvious—and, by the way, the oldest—of camera-angles is the long-shot, which shows all of the subject, from head to foot, if the subject is a person. It may be an ordinary full head-to-foot long-shot, or it may be an extreme long-shot, in which the camera is far enough back to show quite a bit more in every direction.

Next comes the medium-shot — the waist-length figure, if the subject is a person. Very closely allied to this is what has during recent years come to be called the "two-shot" in the Hollywood studios. This is precisely what the phrase implies—a shot, usually about a waist-length one, of two people.

Finally, and in many ways the most important, comes the close-up. This brings the camera close enough to the subject so that every detail is visible. With people, the close-up may range, according to necessity, from a head-and-shoulders portrait angle to an extreme big-head or "choker" close-up, which fills the screen with the subject's head.

Every one of these angles has its vitally important place in good moviemaking. To the professional, the sequence of long-shot, medium-shot, close-up is an elementary part of moviemaking.

It's logical, too. Suppose we are going into a new sequence, starting our action in a new place or room. We begin the sequence with a long-shot—often an extreme long-shot. This establishes the locale. It gives the audience a good, clear impression of *where* our characters are. Next we normally move into a medium-shot. This, bringing the camera—and with it the audience—to a closer view of the people, gives them a clearer understanding of *who* the people are. Finally we

(Continued on Page 294)

Tips on Tripods and Panning

By ROBERT G. MARTIN, A. S. C.

IF you want movies that are steady on the screen, there's only one way to get them. That is to have the camera mounted on a rock-steady foundation when the picture is being made.

Simple, isn't it? Yet overlooking this obvious fact of movie-making is one of the chief faults of the average home movie. Just because the modern 16mm or 8mm. camera is small and light enough to be held comfortably in the hand, about seven out of ten home filmers insist on using them that way. Then they blame the camera or projector because the picture weaves unsteadily about on the screen!

I'll admit that there hasn't yet been an amateur movie camera built with a movement as steady as those of the Mitchell and Bell & Howell cameras we use in the studios. But for home use, they don't need to be that accurate. Any of them—even the cheapest—will give very acceptably steady pictures if it is used as it should be, from the firm foundation of a good, steady tripod.

You'll notice I specify a *steady* tripod. Not all of them are steady; all too often I've seen amateurs who, in the interests of economy or portability try to make use of spindly-legged featherweight tripods which, when extended to the height necessary to bring the camera to the desired eye level, are so precariously perched that the slightest touch will set the camera wobbling.

No, for serious movie work you need a man-sized tripod—one with firm, solid legs strong enough to support a weight infinitely greater than that of any substandard camera yet made. Such a tripod can't be particularly small or compact; usually they cost more than the weaker ones, and they're often less neat-appearing. But they're the only positive way of getting really steady movies under all conditions.

Amateurs can pick up a lot of useful pointers in the use of tripods from things the professional has learned from many years of experience. For example, just take the matter of setting up a tripod. When a professional sets up his tripod, he sees to it that the front leg is extended half an inch or an inch longer than the other two. This way he can carry the tripod with its legs folded, and then, when he wants to set it up, he simply brings the legs down to the ground. That front leg, being a trifle farther-extended than the other two, touches the ground first. Then with one of the remaining legs in each hand, he simply spreads the tripod out until the camera is at the desired height. It's quick, easy and accurate—not to mention being much pleasanter than wrestling with three unruly tripod-legs as I've seen many an amateur (to say nothing of green assistant cameramen!) do!

In this connection, it's an important thing to keep the hinges of your tripod's legs tightened to just the correct degree. If they're too loose, the tripod won't be rigid; if they're too tight, they'll bind and you can't adjust the tripod as easily as you should be able to.

The same thing applies to the tension on friction-type pan-and-tilt heads. Too loosely tensioned, they're no help at all in panning. Too tight, and they bind and produce rough, jerky pans. But there's an in-between setting where the tension mechanism produces just sufficient braking action to make the pan smooth.

It's a very good idea to rehearse your panning once or twice before making the shot, by the way. For one thing, if the camera has been standing for even a few moments with the tilthead in the locked position, even though the tension is released for the pan, it is likely to bind a bit at the start, and your pan will start with a sudden jerk. But if you swing the camera a couple of times immediately before making the shot, you'll have the action nicely loosened before the camera starts running—and the result will be a smooth pan on the screen.

Rehearsing pans is important for another reason, too. You want to be sure your tripod is set up so that the pan is level from start to finish. And this, by the way, doesn't always by any means mean that the camera must be literally level. Far from it: sometimes to produce a level effect on the screen, the camera may have to be placed actually several degrees out of level! You see, the only guide the audience has is the horizon line in the screened picture. Disregarding, of course, such parts of the horizon as are very obviously parts of hillsides, if the general horizon-line on the screen is level, that is all that's necessary. To get this, the camera may sometimes actually be quite crooked—but the effect on the screen is what matters. Therefore rehearse your pans *through the finder*. If they appear level there, the result on the screen will be all right, no matter how unnatural the camera may appear when making the shot.

There's another thing about panning, too: every pan or tilt shot should have a very distinct beginning and end, as regards both composition, action and interest. And the pan should represent a crescendo in all three. Plan your scene so that you begin with composition, action and interest which would in themselves make an interesting, non-panned shot. Then see to it that in all three aspects the shot builds up as it progresses, until at the end your composition is more effective, your action more significant, and the interest stronger than when the scene began.

You can't make any hard-and-fast rules about the direction of panning.

(Continued on Page 298)

SCENARIO FOR A PRIZE-WINNING PICTURE

By JOHN E. WALTER,
L. A. 8mm. Club

EDITOR'S NOTE: This scenario has been proven by production. Filmed by John E. Walter exactly as it is written here, it resulted in a 50-foot 8mm. picture which received Second Prize in the uncut film contest held in April by the Los Angeles 8mm. Club. It tells an amusing, if simple, story which can easily be filmed in almost any city. It requires but three characters and no special settings, props, or the like which cannot easily be obtained by anyone. Its phototechnical requirements are just enough out of the ordinary to make it interesting to the man at the camera. The double-exposure sequence is a simple matter, especially to those who, unlike Walter, do not have to make it as an uncut reel. The several night exteriors and the other interior scenes require a fast lens and fast film. Walter used an f:1.9 Cine-Kodak 8 with Kodak Super-X 8mm film; in 16mm., with the faster emulsions available, these scenes would be still easier. Walter's scenario is, in short, one of the best examples of camera fare we have encountered in a long time, and we can unhesitatingly recommend it to anyone in search of filmable ideas. THE EDITOR.

MAIN TITLE:

(FADE IN)

BOY DATES GIRL

(FADE OUT)

Scene 1. Medium-shot—(FADE IN)—Edith picks up phone and speaks. In dark hallway behind her, double-exposed title "Hello," with notes hinting a musical voice, moves across screen, apparently coming from her mouth as she speaks.

Scene 2. Medium-shot—John sitting at his desk in the office, speaking over telephone.

TITLE:

"SWELL—TONIGHT AT 6:30—DINNER AND 'FANTASIA'"

Scene 2-a. Same as Scene 2.—John hangs up phone.

Scene 3. Medium-shot—similar to Scene 1. Edith hangs up phone and exits. FADE OUT.

Scene 4. FADE IN—close-up of clock. Hands at 3 p. m.

Scene 5. Close-up of label on "Bubble-Bath" bottle.

Scene 6. Medium-shot—Edith's hand is pouring "bubble-bath" into tubfull of water. Camera pans down to show tub and bubbly water.

Scene 7. Medium-shot — Edith in tub, with foamy bubble-bath up to her neck.

Scene 8. Medium-shot—Edith standing, wearing bathrobe. She closes front of robe, and removes her bathing-cap.

Scene 9. Close-up of clock. Hands point to 4:15.

Scene 10. Medium-shot—Edith sits in foreground, and the scene shows her reflected image in her dressing-table mirror. She is combing her hair.

Scene 11. Close-up—Edith applying her make-up. (Several angles on this may be used if desired.)

Scene 12. Close-up—shooting past Edith's shoulder into mirror. She is putting the last touches on her make-up.

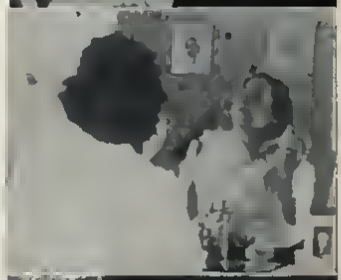
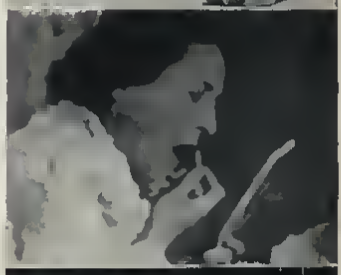
Scene 13. Close-up of clock—5:30.

Scene 14. Close-shot of corner of bed. Several dresses are placed on the bed as Edith decides which one she'll wear.

Scene 15. Close-up—Edith putting on hose. (Close shot of foot as stocking is pulled over it.)

Scene 16. Medium long-shot — shooting into mirror. The reflection shows Edith adjusting her gown, which she has obviously just put on.

(Continued on Page 296)

Top, left, Scene 1; middle, scene 2; right, scene 7; below, scene 15, Scene 10, Scene 11, Scene 40. All illustrations frame enlargements from the author's prize-winning 8mm. picture

Shooting Summer Sports

By ROBERT PITTACK, A.S.C.

IF you're after pictures that are a bit out of the ordinary run of summer movies, why not film your favorite summer sport? I don't mean just going out and making a few haphazard shots of it now and then, but tackling the job seriously and making a real picture out of it. You'll find a well-made sports reel an interest-builder with any audience, and a worthwhile addition to your film library.

There are plenty of viewpoints to choose from, too. You can build up a mighty interesting reel just of more or less intimate shots of top-flight notables in that particular sport, in action and (if you're persistent — and lucky) in their off moments, as well. You can make an entirely different reel detailing the progress of some individual game or contest. Or, if you're analytically-minded, you can shoot a film that will illustrate the finer points of good and bad form in any particular sport.

Naturally, each of these treatments calls for its own special technique in shooting. So, too, does each sport.

For instance, there's the great American game of baseball. I think the newsreel men shooting big-league games give us the best pointers on how to film that. Get up fairly high in the stands, so you can look down at the field, and preferably from a position to one side or the other of home plate.

Speaking generally, your best camera-angle on baseball is a long-shot which embraces a pretty good part of the field. That way, when Joe DiMaggio clouts a homer, you can see something of the ball's progress into the outfield, and you can follow the batter's progress 'round the bases with a minimum of camera-panning. In the case of less potent swats, your long-shot angle will get you some idea, at least, of the fielding without losing sight of the batter; that way, you avoid the indecisive effect of showing your batter—in a telephotoed close shot—connect with a mighty swing at the ball, start sprinting to first, and suddenly slow down as he's caught out by someone not seen in the picture.

My suggestion would be to hold your telephotoed close shots to a minimum; just one or two showing your favorite pitcher—possibly in slow-motion—and if you can get a good angle, maybe a shot or two of a batter. But in general, keep to the more graphic long-shot.

If you're shooting black-and-white, you'll probably find an ortho or chrome-type film the best, for this will give a darker rendition of the green infield, and the uniforms and the white streak of the ball will show up more prominently against this than against the lighter background of the same green grass filmed on panchromatic films. But for the really best results, shoot it in Kodachrome, so you'll really capture the green of the grass, and the white of the uniforms, together with any touches of color either team may wear.

Track events are quite a different matter. There, you've almost got to come to closer angles. But not too close! Not so long ago I saw an amateur attempt at covering an intercollegiate track-meet in 16mm. The pictures were good enough, but the man at the camera was far too anxious to get intimate shots of his team's stars doing their stuff, and used a telephoto almost from beginning to end. His close-ups were far too close-up: you'd see a high-jumper or pole-vaulter come charging into the picture, then suddenly soar up out of the frame and down into it again, while you wondered if he cleared the bar or not. You'd see a javelin ace bound across the camera's field, looming bigger and bigger until the screen was almost filled with his muscular right arm heaving his spear out of the frame.

Get the close shots, all right, but plan your angles so that at the athelete's closest approach to the camera he has plenty of head-room—and foot and side-room, too. And in events like the javelin-throw, the discus, and the shot-put, leave plenty of room in your shot for those flying legs and arms which may whirl, dervish-wise, over a considerable area as the fellow makes his cast.

Making follow-shots of some of these events may be good, while in others it would be equally bad. The strictly track events—the hundred, the hurdles, and so on—are "naturals" for really good, smooth-panning follow-shots if you can make them. But try to pick a camera-position where your subjects will keep as nearly as possible the same size on the screen from start to finish. Among the field events, the three already mentioned—javelin, discus, and shot-put—don't lend themselves any too well to much following, though a few follow-shots intercut with extreme long-shots and a few closer shots of the actual heave, aren't bad if cut properly. The high and broad-jumps and the pole-vault are subjects upon which a follow-shot would be absolutely wasted. A moderately long-shot angle is much the best, for it shows clearly the point from which the jumper took off, and the spot where he landed. Occasionally, though, if you can get into the right position for it, you can get some strikingly effective close-shots of the higher pole-vaults if you can set up your camera reasonably close, and shoot up from a low angle so you get the vaulter just sailing over the bar. Then you can intercut these angles with other suitable shots showing the same athlete making his approach, and another, probably from a slightly more distant angle, landing. With quick cutting this can be effective, and even though you show three or more separate vaults, they will look like one on the screen.

Slow-motion — especially at higher speeds like 48 and 64 frames per second—can be invaluable in filming such events. This is especially true of the hurdles, the high-jumps and pole-vault, and the shot-put, javelin and discus events.

If you're an aquatic fan, swimming and especially diving are fine camera-fare, too. Most swimming races are usually best shot from a head-on position, with the camera looking down on the swimmers. But the diving events give you an opportunity for a wide variety of camera-angles. From a full side-on long-shot position you can get one impression of the dive. Then from a high point—maybe on the high platform behind the diver, you can get another and very different view; and finally, especially in the high diving, shooting up from below gives you still a different view. Unless you're awfully good at it, I'd avoid follow-shots of diving.

Speaking generally, slow-motion is best for diving. Just how slow had better depend on your camera and the rate you can afford to see film race past its lens. But 64-frame speed isn't any too much for really dramatizing the form of a champion diver.

Golf is another subject for fairly close shots and a reasonable use of slow-motion. Side angles are usually best—preferably from the right side of the average right-handed golfer—with the camera far enough back so that even at the peak of its swing, the head of the club stays in the frame. As a rule, longer shots in golf aren't very meaningful, even in slow-motion, for you just see the player swing, and the ball vanishes too fast for the eye—or camera—to follow.

Sometimes you can get one very interesting angle on golf if you use a moderate telephoto lens and place the camera directly behind the player, right down on the ground, so that the ball itself occupies a prominant spot in the foreground of your shot. Filmed in slow-motion, you get quite a surprising effect in this angle, with the club sweeping slowly down into the frame, then up again, while the ball flows rapidly out into the distance.

And—you can sometimes use this same angle on close shots of putting. In general, though, putting is best shot from a moderately high camera-position and a long-shot angle from behind the player. And a film that gives a good, dark rendition of the green, against

(Continued on Page 300)

We Make a 16mm. Western

By CARL FALLBERG

and

LARS CALONIUS

ONCE upon a time, as the storybook says, a couple of ambitious young cartoon-makers ont at Walt Disney's mouse-factory had a hrsinstorm. Maybe it was jnst a worse one than nsual. Anyway, they wanted to learn more of the practical dstails of film production—what it takas to put a film together and make it tick. Reasoning that those fundamentals are tbe same whether the snbject is live action or a cartoon, they decided to devote their spare tims for the next six or seven months to making a 16mm. feature picture

And did they learn about the problems of film production—! We can answer that with a great big affirmative, for we might as well break down right now and admit that we were the two brainstormers involved. We learned a lot abont the mechanical fundamentals of making a real movie—and we also learned a lot about why professional producers, directors and cinematographers grow gray hair and acquire headaches and nervons indigestion! Whsn you start making a feature picture, we found, you can get just as good a crop of beadaches ont of 16mm. as from 35mm. Probably ths same thing goes for 8mm. as well.

And we'll never make uncomplimentary remarks about a professional picture which has gone 'way beyond its prescribed schedule and budget! Onrs did, too! At the start, we planned to have our spic finished in six months; well, a year and a half more was required to finish it. Final score, two years (of week-ends and holidays) in production, 7,000 feet of Eastman Super-X 16mm. reversal film shot, and over $850 of our hard-earned dollars invasted. The result is a fasture-length picture of 1750 sixteen millimeter feet, with a running time of 1 hour and 15 minutes, which our friends have told us is "not too had for amateurs."

And don't make any mistaks ahont it: we *are* amateurs. None of us had looked a movie-camera in the lens before—much less handled one As a result we made plenty of mistakes no real-dyed-in-the-wool cine-amateur would ever fall into, and wasted plenty of time, energy and film on stuff that even we had to throw away. Bnt—a hopeful sign was tha fact that we made fewer mistakes as tba picture prograssed, and found ourselves nsing less and less film in getting what we wanted. That's something, anyway!

Being rsther naive (maybe dumh is a better word!) about picture-making problems at the start, we hadn't more than a very hazy idea of the production problema concerned in making even an amateur movie. In some ways, they're probably even worse than the ones you run into making a professional film, for this business of doing everything yourself complicates things no end.

First of all, there's the story to work out. You'll get all sorts of great idaas—and then find you can't shoot 'em with what you've got to work witb Then there are actors to line up—sets to hnild—costumes and props to get—locations to pick out. And finally, shooting. And two guys with just week-ends to work on can get just so much done, and no more. Hence the two years Well, it's the hard way to learn how to maks a picture, but the lessons have a way of sticking when they come hard!

The story we selected was a rip-roaring "western," complete with sheriff, bad men and much shooting Ws called it "Grizzly Gnlch," after the town in the foothills of the Cahfornia Sierras in which the action was supposed to occur. To make matters worse, we laid tbe action in the rip-roaringest days of the wild old west—1879. That made it a "period" picture, about which more anon.

Wells-Fargo messenger is held np and killed by a bandit in the hills near Grizzly Gulch. The local sheriff is a well-intentioned arm of the law, but faced with one corpse and no witnasses, he doesn't make much headway in solving the case. So the express company sends ont a call for a Pinkerton private detective.

Meanwhile, the Grizzly Gulcb Sheriff has arrested a card-sharp with whom he'd been too trustingly playing poker. The Sheriff's deputy — our picture's "comedy relief," by the way, who we called "the poor man's Andy Devine"—stupidly lets the sharper escape, after which it is discovered that they had unknowingly bad the murderer in their jail.

While the town is, as the novelists

(Continued on Page 303)

SECRETS OF
Using Telephoto Lenses

By CHARLES A. MARSHALL, A.S.C.

THERE'S nothing particularly mysterious about using telephoto lenses once you understand what they are and what they do. Really, a telephoto is basically like any ordinary lens except that in comparison to the lens ordinarily used on a film or plate or given size, the telepboto has a longer focal length. Accordingly, the dimensions of the picture-frame remaining in each case the same, the longer-focus lens will cover a narrower angle of view, and therefore give you a relatively larger picture of any given object.

But if that tele-lens were used on a film or plate of proportionately larger size, it would become a strictly normal objective. This is excellently illustrated by the familiar 25mm. (1-inch) lens normally fitted to most 16mm. cameras. Used on 16mm., it is what we generally call a "normal" lens, covering an angle of 21 degrees. Put that same lens on a 35mm camera (assuming it is of a design capable of covering the larger field) and it becomes a wide-angle lens, covering an angle of 47 degrees. Put it on an 8mm. camera, and it becomes a telephoto, covering an angle of slightly under 10 degrees! Nothing about the lens itself is changed —but its effects, and the basic purpose of its use, have changed beyond recognition.

In the same way, suppose we consider that same 1-inch lens on a 16mm. camera in comparison to the telephotos most commonly used in 16mm. The 1-inch has an angle of 21 degrees. Shooting at a subject 100 feet away, it will cover a field of view approximately 38 feet wide. Replace that 1-inch lens with a 2-inch telephoto, and at the same 100-foot distance your camera's field has narrowed down to a mere 19 feet wide. Substitute a 3-inch telephoto, and the field is cut down to just under 13 feet wide; with a 4-inch, it's down to 9 feet, and with a 6-inch, to 6 feet. In other words, as you double the focal length, you cut the angle of view roughly in two—and by the same token, you get an image of any given subject approximately twice as large.

Now in doing this, you're putting your camera, figuratively speaking, at the end of an increasingly long stick. It's easy enough to take a foot rule, grasping it by the end, and hold it out at arm's length and score a bull's-eye touching a nearby target. If you try the trick with a yardstick, also grasped by one end, it's harder. Doing the trick with a 10-foot pole held the same way is an almost impossible job: the tiniest quiver of your hand sends the far end of the pole leaping madly all over the target.

Using a telephoto lens is exactly like this: in magnifying the picture, it also magnifies the movement of the camera disproportionately; what is actually the tiniest quiver turns into a minor earthquake on the screen. And with a really powerful telephoto—say a 6-inch on 16mm.—a fraction of an inch of movement of the camera makes the picture jump several feet on the screen.

So the first essential in using a telephoto lens is to have a rock-steady foundation under the camera. In some types of work with a 16mm. or 8mm. camera and a normal lens (25mm. focus for 16mm.; 12½mm. for 8mm.) you can in a pinch hold the camera in your hand; it's a bad practice, but you can sometimes get by with it. But with a telephoto, the vibration of even the steadiest hand is magnified into great surges. The only thing to do is to use a tripod. And for best results, make it a good, sturdy one. If you're using anything over a 3-inch or 16mm., or a 1-inch on 8mm., don't try to use any of the cheap, "featherweight" or modified small still-camera tripods—they aren't steady enough. Use a tripod that's made for holding a man-sized still or movie camera. Maybe it's bigger and bulkier—but it's also steadier.

And where you're using really long-focus telephotos, say over 6-inch focus for 16mm., you won't go wrong if you have a mount made which provides a steadying brace between the lens and the tripod, to eliminate any vibration in the long, heavy lens-barrel!

The next point is to be sure your lens is really properly shaded. Most of the lenses made for use with 16mm. and 8mm. home-movie cameras are fitted with what the manufacturers laughingly term a sunshade. But most of them are

(Continued on Page 303)

16 MM Home Movie Previews 8 MM

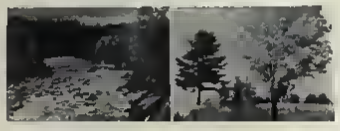
Part of THE AMERICAN CINEMATOGRAPHER'S service to its readers is individualized review and criticism of amateur movies by members of the A.S.C. In making these analyses, the reviewers make full allowance for the differences between professional and amateur cinematography in equipment and facilities, but recognize, too, that there cannot really be any double standard of judging cinematography: good photography is good photography, regardless of whether it is on 35mm., 16mm. or 8mm. film. It is their aim always to be constructive in their comments, especially to point out to the home moviemaker how he may utilize in his own filming the many little tricks of camerawork, lighting, editing, titling and direction which professionals have learned through long years of moviemaking, to the end that his films may be better, smoother and more graphic.

We invite all readers to send in their films for review.

THE EDITOR.

NEW HAMPSHIRE ON PARADE

Scenic, 400 feet 16mm. Kodachrome.
Filmed by Fred and Ruth Ells.



"New Hampshire on Parade" shows why Fred Ells is regarded as one of the world's foremost cine-amateurs. Choosing a spectacular subject—New Hampshire's White Mountains in their autumnal coloring—the Ells partnership has turned out a spectacularly pictorial scenic film. It is one of the finest examples of pictorial cinematography we have seen in a long time, in many ways superior to the previous Ells films which have won acclaim in virtually every quarter of the world.

The continuity of the film is excellent. The film shows New Hampshire from early autumn when, as the introductory title explains, "the last tourist has departed," through the fall until the first snowfall on the mountains ushers in winter. This continuity is carried out not only in titles and subject-matter, but also in color. The early scenes make only restrained use of the warm autumn colorings, with the dusty dark-greens of early fall much in evidence; then, as the film and the season progress together, the riotous reds, oranges and yellows of New England's crisp autumns come more and more into view, finally dominating the picture. In closing, cold, wintry grays dominate the final scenes.

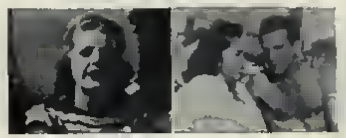
The titling is excellent. There are plenty of titles to explain such scenes as need explanation and to stress the mood of the film. These titles are in themselves a spectacular feature of the picture: neatly lettered in white on deep blue cards, they have a border of red and yellow autumn leaves which excellently carry out the theme of the film.

The editing is excellent. The film maintains the characteristically slow, sedate Ells tempo, giving the audience ample time to appreciate the pictorial beauty of each scene. One slight improvement in cutting might, however, be suggested: in the brief duck-hunting sequence, the cut from the hunter's firing to the duck's fall into the water might be quickened to good effect, cutting the latter scene, say, just as the duck first appears in the frame.

A second minor criticism may be made of the inclusion of three sequences in the film which were obviously made earlier in the season and have verdant green backgrounds which do not match well with the picture's autumnal mood. Yet on the other hand, these sequences —one showing a kid at play, another some excellent shots of deer, and the third a most entertaining little sequence of a puppy and a kitten frolicing together—undeniably give the picture a touch of human-interest appeal which does much to balance the otherwise uninterrupted parade of photographically lovely, but (to some audiences) almost abstract scenes.

HAPPY LANDING

Scenario film, 360 feet 8mm. Kodachrome.
Filmed by Mrs. Mildred J. Caldwell.



This picture is another version of one of the latest cooperatively produced scenario films of the Long Beach Cinema Club, and an unusually good one, at that. Filmed in Kodachrome, it is in the main a first-class example of fine camerawork, continuity and editing.

The double-exposed titles which open the picture are excellent, though either a darker background or slightly less exposure on the one used would have been photographically more effective. The subtitles — white-lettered against a blue background — are excellent in wording and photography.

In presenting her story, Mrs. Caldwell makes more than ordinarily effective use of angle-shots. Her opening—a close-up of a girl's hand blowing an auto's horn, followed by interesting angle-shots as she introduces three of her principals—starts the picture off in an intriguing fashion, and from there on she makes fine use of unusual angles wherever possible. Her compositions are very good.

A few criticisms, of a relatively minor nature, may none the less be levelled at "Happy Landing." First of these is the fact that in the early sequence in the gas-station, two different sets of "takes" appear to have been intermixed: some taken on a sunny day, and others on a cloudy one. The result is none too pleasing; both should have been made under similar conditions of weather and lighting. In a few long-shots, here and elsewhere, there is also a slight tendancy to underexposure. The scene in which "Bruce" belatedly pursues "Jack" and "Ann" to their car at the airport could have been given closer cutting. The effect would be better if the scene were commenced just as "Bruce" enters the frame. And in the closing sequence, even though the audience knows that the suitcase with which the luckless "Bruce" has been pursuing "Ann" doesn't belong to her, it would be much more effective if, when finally he catches up with her, it was made clear—via a close-up of her speaking, and a spoken title—that it isn't hers. As it is, "Bruce's" reaction—a faint—seems a bit unnatural, and it occurs too fast for the average audience to get the full effect of the situation.

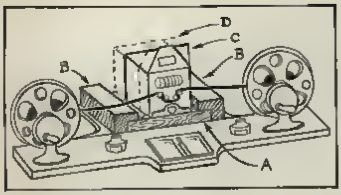
PASADENA TOURNAMENT OF ROSES

News-film, 200 feet 8mm. Kodachrome.
Filmed by Harry E. Ward, Jr.

This is quite an effective presentation of this almost too-frequently filmed subject. Ward has chosen his camera-angles surprisingly well, avoiding the mistake made by so many amateur filmers of having the parade approaching the camera from right to left. If you will study the methods used by professional newsreel cameras, you will see that they

(Continued on Page 296)

THE IDEA EXCHANGE



Movable Viewer

Film-viewers are mighty useful in editing your film, but the way most of them are mounted, they're mighty inconvenient when you only want to rewind your film. If they're mounted on the editing-board in a position where they're really handy for viewing purposes, they're right in the way when you rewind, and you either have to hold the film clear of the viewar, or run the risk of getting it scratched as it rubs across the viewer.

But you can get around this problem if you re-mount the viewer as shown in the sketch, so that it can be slid forward when you want to use it for viewing film, and then slid back out of the way when you don't need to view your pictures.

The principle of the idea is shown in the sketch. You'll probably have to begin by making a new and larger board for your editing outfit. That's an advantage, anyway, for most of them don't give you enough working-space anyway. The base for the viewer should be a good deal wider and longer than in the original base-board. Mount your rewinds and splicer on the new board as usual.

But don't mount your viewer on it! Mount the viewer on a separate block of wood (A in the sketch). This should be a good deal wider than the viewer's base.

Then make the two L-shaped rails, "B", and mount them as shown, on the editing-board. The viewer's new base-block, "A", should be mounted under them as shown, so that it will slide forward and back. The viewing position is indicated at "C". The out-of-the-way position for convenient rewinding is shown by the dotted outline at "D".

The most important part of the whole job is to make sure the viewer, when in its forward position, is held very solidly in place. You're seldom conscious of it in using a good rewind, but pulling film through any motion-viewer requires quite a bit of force, and if the viewer isn't very solidly mounted it can pull it right out of place. So make the overlaps of the viewer-base "A" and the guide-rails "B" very big, and make it a really snug, tight fit. If you can, it's a good idea to provide a good, strong catch to anchor the viewer in place when in the viewing position. It had better be a spring catch so it will click into place automatically when you slide the viewer forward. That way, you can't forget and start running film through when the viewer is either incorrectly aligned with the rewinds, or in a possibly loose, unsecured position.

J. D. HANSEN

Lens-Caps

Many amateurs, especially while they're away from home on vacations, and not in reach of their favorite dealer's store, are likely to lose or mislay the rubber dust-caps which protect the lenses of their cameras, and defer buying new ones until they get back home. You can get very acceptable substitute lens-caps in most any drug-store, by just asking for rubber nursing-bottle caps (not nipples!). Several sizes are available: the sizes for the various types of small-necked nursing-bottles will usually fit the small lenses of 8mm. cameras, and many of the slower or shorter-focus lenses on 16mm. cameras, too. The caps made for wide-necked nursing-bottles will do excellently as emergency caps for the larger-diameter lenses. As a matter of fact, in Hollywood studios they use the similar rubber covers made for protecting food cells for this same purpose.

ROY OVERBAUGH, A.S.C.

Adapting Minicam Sunshades

I have a Contax 35mm. miniature camera, and a Bell & Howell 8mm. Filmo, and I never could see any sense in buying filters for the minicam, and then buying another duplicate set for the cinecamera. So I've made an adapter that lets me use the sunshade-filter-holder of the still-camera on the movie outfit as well. I simply made a doughnut-shaped disc of aluminum that serves as an adapter. The inside is cut to provide a reasonably snug fit on the lens-shade of the eight. The outside of the disc is turned to the same diameter as the Contax's lens-mount, so the latter's sunshade-filterholder can be fitted onto it. To hold the adapter in place, I provided a small, counter-sunk set-screw by which it can be tightened solidly to the smaller camera's lens barrel. If you have several lenses for the cinebox—wide-angle, telephoto, and so on, just make up an adapter for each—and you can do all your shooting with only one set of filters for two cameras.

A. P. SMITH

Dust-cover For Editing Outfit

If you don't like to leave your editing-board, viewer and projector out in the open where they'll collect dust, but still want them handy for use any time you need them, you can make an excellent dust-cover from some of those tough, transparent fabrics like "pliofilm" which they use for ladies' raincoats. Just get a piece of it large enough to cover whatever piece of equipment you want to protect, and have your wife fashion it into the desired bag-like shape, in some cases fitting the opening with a drawstring so you can tighten it up, as for example around the pedestal of a projector. This makes a very neat-appearing dust-proof cover which protects the equipment very well, and may be removed or put on in a few seconds. Also, it helps keep your room neater, which pleases most wives!

C. W. WADE

"Douser" For Projector

Home-movie projection can be made much smoother if the projection-light isn't switched on until all the leader-strip has passed by the film-gate. But some projectors are wired so that they won't run unless the projection-lamp is burning. You can of course run the film through to the start of your picture holding your hand over the lens, but a more convenient idea is to fit a "douser" such as they use on 35mm. theatre-projectors, and on the big 16mm. arc projectors. This is simply a hinged metal shutter, pivoted so it can be swung into or out of the path of the projection-light. In professional projectors, it is placed right in front of the lamp-house. But in most 16mm. and 8mm. projectors, this can't be done, so you'll have to put it right in front of the lens. A very

(Continued on Page 304)

THE IDEA EXCHANGE is just what the name implies—the place where 16mm. and 8mm. cinefilmers can swap moviemaking ideas with the other fellow. The little improvised tricks you used to solve one of your cinemaking problems may be just the answer to something that's perplexing a fellow filmer—and one of his ideas may solve a problem for you.

To help out this exchange, THE AMERICAN CINEMATOGRAPHER invites you to send in descriptions of gadgets, tricks, shortcuts and methods you have used in any phase of home movie work—shooting, editing, titling, projecting, processing, and the like. If possible, send along a photograph or sketch to help make your description more clear to the other fellow. For every idea published in THE IDEA EXCHANGE, we'll give you two projection-reels and cans. Really unusual ideas will receive higher awards. When sending in your idea, let us know whether you shoot 8mm. or 16mm. to facilitate sending you the right equipment.

AMONG THE MOVIE CLUBS

CALLING CLUB SECRETARIES!

This department of THE AMERICAN CINEMATOGRAPHER is *your* department. We feel that thera is a great deal to be gained all around by making these raports of club activities available to other clubs and to independent cinefilmers all over tha couutry. To that end, we ask all you club secretaries to consider yourselves special raporters for THE AMERICAN CINEMATOGRAPHER with the assignment to "cover" tha activities and meetings of your clnb Send us those reports es quickly as possible after the event has happened—and maks your raport accurate and prompt. Wheraver possible, we'd appreciate getting reports of meetings that have actually happened, rather than of those that are schednled to happen in tbe future, so that none of ns will be embarrassed by reading that something is going to happen at such-and-such a meeting, only to find later that some switch in schedule made the actual meeting very different. And please — remember that printers and editors wait for no man—so get your reports in for the next issue by not later than the 20th of the month.

The Editor.

Indianapolis Amateur Movie Clnb's "Open Hause." Left committee in charge, front row, l. to r., Dr. Wm. E. Gabe; Elmar M. Culbertson, Carl A. Luethge; rear row, l. to r., Stanley Brown, Alfred Kaufmann, Manley Brown. Right, view of part of the audience.

Indianapolis Holds Open House

On May 7th the Indianapolis Amateur Movie Club held its fourth annual Open House, jamming the Memorial Auditorium with a capacity crowd of 500. The program included "The Martins and The Coys," 8mm monochrome, produced by a group of Indianapolis Amateurs assisted by club-member Dr. J. W. Sovine; "Our Feathered Friands," 8mm. Kodachrome, produced by club-members Manley and Stanley Brown; "The Royal Visit, Halifax, 1939," 16mm. Kodachrome, produced by T. J. Courtney; "Garden Life," an AMERICAN CINEMATOGRAPHER prize-winning pictura, filmed in stop-motion, 16mm. Kodachrome by Eugene L. Ritzmann, of San Francisco; "Bees," 16mm. Kodachrome, produced by A. J. Thomes, of Indianapolis; "Deep South," 16mm. Kodachrome, produced by club-member Dr. Wilham Gabe; and "Highhights and Shadows," 16mm. sound-film made for the Eastman Kodak Co. by Dr. J. S. Watson, A.S.C. The silent films were accompanied by a musical score planned by club-member Dr. L. E. Foltz, which received almost as much comment es the films. Highlight of the program, judging by applause and comment, was Dr. Gabe's "Deep South," with "Garden Life" a close second

Staff for the show included Alfred Kaufmann and Wilbur Worl, 16mm. projectionists; Manley Brown and Elmer Culbertson, 8mm. projectionists; musical scoring by Stenley Brown and Dr. Foltz; commentator, Dr. Gabe; and ushers, C. A. Luethge, C. A. Purdy, H. H. Riegner, J. A. Bender, C. Wetzel and O. Peters.

The aim of the program was to show the visitors what amateurs can do with modern home-movie cameras. As a program nota stated, "We have intentionally prepared our program to show the average movie camera owner what can be accomplished by devoting a little time and thought to their movie making. All of these amateur pictures could be equaled or surpassed by the average amatenr if he would plan his pictures before exposing his film."

ELMER M. CULBERTSON

Washington S.A.C. Banquets

The Washington (D.C.) Society of Amateur Cinematographers held its annual banquet at the Fairfax Hotel on May 16th. With an estimated attendance of between 40 and 45 members expected, 65 showed up and ate the hotel out of house and home. Highlight of the evening was a showing of the AMERICAN CINEMATOGRAPHER prize-winning film, "Nation Builders," made by James A. Sherlock of the Australian Amateur Cine Society. Everyone enjoyed it and commented that it was a great lesson in telling a story in movias without resorting to titles. President William McConnell of the Washington 8mm. Club conferred an honorary Life Membership in bis group upon Washington S.A.C.-President Chedester, and then appropriately gave the featured talk of the evening, on the subject of "Good Fellowship in Movie-making."

The Club's recent auction, reported in the last issue of THE AMERICAN CINEMATOGRAPHER, was a huge success. More than enough to purchese the desired screen was raised; the members entered fully into the spirit of the affair and everything sold went for high prices. The Club is planning to hold a picnic late in June at the Chesapeake Beach summer-home of Vice-President Everett Marsh.

JOHN T. CHEDESTER, President.

Synchro-Sound for Long Beach

The first amateur-produced color films with synchronized sound to he made by a member of the Clnb were shown at the May 7th meeting of the Long Beach (California) Cinema Club in the auditorium of the Y.W.C.A. President Mildred J. Caldwell demonstrated the accuracy of the new synchro-sound method by exhibiting 600 feet of Hawaiian pictures accompanied with perfectly synchronized narration and music. For comparison she showed the remaining 300 feet and gave the narration by using a microphone. The films showed the approach to Oahu, the making and selling of flower leis, the sugar and pinaspple industries, tropical fruits, the Oriental section of Honolulu and other scenic features of the islands. Clarence Aldrich showed a very clever comedy shot in Kodachrome in the Red Rock Canyon and two reels of the Bathing Beauty Parade.

On May 13, the members left by chartered bus for the Owl Auditorium in Los Angeles for a get-together of all Southern California Clubs. An outstending picture of the year was exhibited by each Club. The Long Beach group took a 400-ft. black and white 16mm. film, "Father's Time," produced by Raymond Fosholdt.

Friday, May 17th, was set aside as Long Beach night at the Photographic Show held in the Roosevelt Hotel in

(Continued on Page 305)

HERE'S HOW

For many years one of the most important services THE AMERICAN CINEMATOGRAPHER has performed for its readers has been the answering of technical questions about all phases of amateur and professional movie-making. These questions are usually answered by individual letters, to permit going into the necessary detail. However, in response to many requests, we have decided to publish, in abridged form, some of these questions and their answers which we believe may be of interest to other readers. THE EDITOR.

TRIPLE TURNTABLES

Some time ago I read in a description of one of Duncan Mc. D. Little's "Movie Parties," that triple turntables were used in scoring the pictures. Why do you suppose triple turntables, instead of double, were used?

Dr. Frans B. Buerger,
Long Beach, Calif.

The most probable reason for using triple turntables would be to make possible the use of sound-effects in addition to music, without interrupting the continuous flow of music from one disc to the next. The sound system would be one which would permit the "mixing" of sound from any or all of the three pick-ups at once. In use, turntables 1 and 2 would be used in the usual manner, to play musical recordings, fading from one to the other as required. The third would be used for sound-effects records —crowd noises, applause, sirens, airplane motors, train noises, surf, and the like—played at the same time as the music, and at a different volume-level, louder or softer than the music as might be desireble. Such sound-effects records may be obtained from the RCA Manufacturing Co., Camden, N. J.; the Speedy-Q Sound Effect Record Co., of Los Angeles; or the Standard Radio Co., of Chicago.

FOCUSING TAPE-MEASURES

What is the name and address of the manufacturer that makes the circular tape-measure that photographers in the Hollywood studios use in front of their cameras?

Allen Brown,
Hawthorne, N. Y.

The tape-measures used in the studios aren't at all special—just ordinary carpenters' tapes, usually from 25 yards to 100 feet long. The one we use was bought in an ordinary hardware store; as we remember, it cost 35c.

CUTTING IN MUSICALS

I have been wondering for years whether, in professional productions, when a singer is being photographed, the cuts from long-shot to medium-shot or close-up literally in the middle of a note are the result of using several cameras or expert work on the editing-block after such scenes are overlapped.

Reginald E. LaBelle,
Dalton, Mass.

In the very early days of sound, such scenes were made using many cameras and getting every possible angle at one "take." Today, however, virtually all such scenes are made by pre-scoring. The singer records her song first, making only the sound-track record. Then the picture is made, silent, playing back the previously-recorded sound from a film or disc reproducer electrically synchronized with the camera, while the singer simply "mouths" the words—sometimes actually singing softly—and has only to concentrate on looking attractive. In this way, as many angles as may be desired can be filmed separately, each under the most favorable photographic conditions, and each perfectly synchronized to the one sound-track, which in turn has been made under ideal musical and acoustic conditions. The cutting from one camera-angle to another is then easily accomplished in exactly the same way that cuts are made between any ordinary dialog shots.

THIRD DIMENSIONAL MOVIES

I recently saw the Pete Smith short, "Third Dimensional Murder," which is observed through a viewing-glass with a red filter over one eye and a blue filter over the other, and a film on which one image is toned red and the other green. I have been experimenting to produce this same effect by projecting two stereo transparencies, one toned in red and the other in blue, viewing the picture on the screen with an Orthoscope having the two colors in reversed position. So far I have been unsuccessful; the tones I have been able to use do not give the desired effects, and the picture I get on the screen shows a muddy brown. I do not like to waste motion picture film (16mm.) on further experiments before I am sure of a reasonably good result. Can you give me any information on how the colors were produced, or is there anything published describing how to make such third-dimensional movies or transparencies?

Arthur Wolff,
Chicago.

The film you saw was produced by Metro-Goldwyn-Mayer, so we referred your question to John M. Nickolaus, M-G-M's Laboratory Supervisor. He states that you have probably been using metallic tones, and that the only successful way to get this two-color stereo effect is through the use of dye-tones and a rather complicated imbibition printing process, which as you probably know is comparable to the Eastman Wash-off Relief color print (still) process, or to the familiar rubber-stamp. Furthermore, he states that the colors used must be absolutely pure —a pure, monochromatic red, and an equally pure, monochromatic blue which are exactly complementary. The dye-tone and imbibition printing eliminate the solid, metallic-silver images which, when superimposed, produce the muddy effect you mention.

Mr. Nickolaus suggests that a vastly more simple method of obtaining the third-dimensional effect you wish would be to use "crossed" polarizing filters over your two projectors, and viewing-glasses using similarly "crossed" polarizing screens. We have seen third-dimensional 16mm. and 8mm. movies and 35mm. still transparencies made and projected by this method, and the results are perfect. There is the further advantage that this method permits the use of Kodachrome.

The only reason the professionals used the two-color toning method instead of this was that for commercially practical professional use they necessarily had to use a single film and a single projector, instead of the two required for the polu-screen method. Since, however, you appear to be using two projectors anyway, this objection does not hold good in your case, and the results obtained from the polarized-projection method are so greatly superior to any other that we would strongly urge you to use it.

NEUTRAL-DENSITY FILTERS

I have frequently seen, in articles about professional cinematography, references to "Neutral-Density" filters. What are they, and for what are they used?

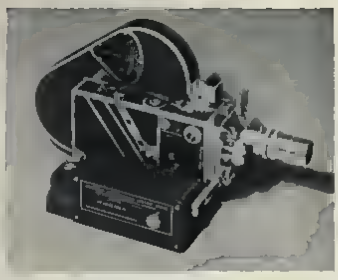
W. C. McCoy,
Washington, D. C.

The "Neutral-density" filters are just what their name implies: they are neutral-colored filters which do not have any color-filtering effect on the picture, but which by reason of their density hold back part of the light from reaching the film. They are available from several manufacturers, including Eastman Kodak (Wratten); and Harrison, and Scheibe. They are usually available in five densities, termed the .25, .50, .75, .100 and .200, according to the amount of light each absorbs. Since they have no color-filtering effect, they may be used on any type of film (including Kodachrome), and they have the same factors on all types of film. Their factors are: .25, 1.8; .50, 3.1; .75, 5.6; .100, 10; .200, 100.

They have several uses. Since they absorb a part of the light, but without changing the rendition of color, they may be used to control exposure. For example, we recently made some exterior scenes using 16mm. Agfa Triple-S Panchromatic film, which has a speed-rating of Weston 100 to daylight. The shot was in bright sunlight, and the meter indicated an exposure of f:32—but the lens on the camera would only stop down to f:16. By using a .100

(Continued on Page 306)

...THE SHOWCASE...



Sound Drive For C-K Special

A new synchronous electric motor-drive unit for operating a Cine-Kodak Special in synchronism with a sound recorder has been developed by the Auricon Division of the E. M. Berndt Corp. The device is intended primarily for use with the Auricon 16mm. sound-on-film recorder, but it should be possible to use it in conjunction with other recorders operated by suitable synchronous motors powered by 110-Volt Alternating Current of suitable frequency.

The Auricon Motor-drive weighs only four pounds and is finished in black baked enamel with chromium trim matching the finish of the Cine-Special camera.

The Cine-Special Camera is attached to a motor-drive by the camera's tripod socket No alteration to the camera is necessary to mount the camera on the motor-drive. Both small and large size standard tripod sockets are provided in the base of the motor-drive, so that any tripod can be used. Four screw-holes in the base allow the Auricon motor-drive to be mounted in a "blimp" without alteration.

The Cine-Special camera-magazines (film chambers) can be changed without removing the camera from the motor-drive. To protect the camera mechanism from damage, the motor-drive is interlocked electrically with the camera's start-button A sliding post must first be placed in position over the Cine-Special camera start-button, holding it in, before the motor-drive will operate.

For field use where regular A.C. house current is not available, this motor-drive operates from an Auricon field power-supply. The power-supply, no larger or heavier than a portable typewriter in its case, will operate a complete double-system talking picture set-up consisting of an Auricon Sound Recorder and a Cine-Special camera driven by the Auricon motor. Over 4000 feet of film (2 hours of synchronized talking pictures) can be run before recharging of the self-contained power-supply battery is required. Then, recharging of this 6-volt battery is accomplished overnight.

New, Durable Lens-Coating

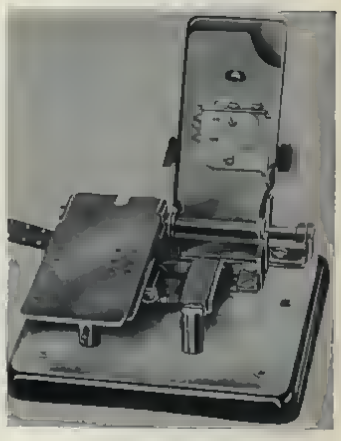
A new anti-reflection lens-coating service is announced by the National Research Corporation, of Boston, Mass. The process used is licensed under the well-known Cartwright and Turner patents, and consists of evaporating a suitable fluoride in a high vacuum. The vapors condense on the surface of the lens to form the non-reflection coating, which is then hardened.

National Research executives claim two outstanding features for their firm's lens-coating service. In the first place, they state that they are able to handle coating on a large-scale production basis, and to give rapid delivery. In the second place, they state that they have succeeded in developing lens-coating films which are hard enough to be washed with soap and water and rubbed with ordinary cleansing tissue without suffering damage. The quality of the films, they feel, is something new to photographic trade. Now, they state, coated lenses can be handled in the same manner in which a good, uncoated lens would be treated. As far as practicality is concerned, this represents an extremely important advance.

The firm has, it is stated, had experience in coating not only camera lenses, but also projection equipment and sound-recording optical systems. In the latter case it is necessary to coat for minimum reflection in the ultra-violet end of the spectrum. The firm has, it is stated, done this type of work both in quantity production in new lenses, and on equipment already in use in the field.

DeVry Sons Carry On Firm

With the election of William C. DeVry to the presidency of the DeVry Corporation of Chicago, the high tradition of this internationally known family name will be carried on in the film industry by the son of its lately deceased founder and president, Dr. Herman A DeVry. Another son, Edward B. DeVry, has been chosen as secretary-treasurer of the firm and president of its educational subsidiary, DeForest Training, Inc. The new president had been actively in charge of his firm's selling organization at the time of his father's death, having filled the post of sales manager since 1932. His brother had been secretary of the projector manufacturing organization since 1928. Both have had practical experience in commercial motion picture production, and are well versed in the projector problems of both the user and producer. The new president has been especially active in furthering his firm's aggressive development of new types of 16mm. sound projectors.



New Bools Splicer

The American Bolex Co., Inc., announces the new Bools Automatic Splicer for use with 8mm., 9 5mm. or 16mm. film, silent or sound. While the new splicer was designed in Switzerland, it is now being produced in America. The device is made entirely of steel, heavily plated in satin chrome. The whole splicer is mounted on a skid-proof and warp-proof ebony-finished wood base. The cutting leaves are stated to be extremely precise, so that splices made with the device leave neither a white or black line, indicating that the emulsion neither overlaps nor separates. The file is of hardened steel and double-edged for long service. It is accelerated in operation by means of a spring.

Grooves in the cutting leaves are provided to catch surplus cement and prevent it from running down the films being spliced. This feature is stated to be particularly important in preventing damage to Kodachrome.

Princeton Photo Switchboard

Price Industries Corporation, makers of the Princeton line of photographic products, announces the Princeton "Photo Switchboard," a single compact unit for controlling many light-sources. In addition to its obvious uses in the still-photographer's multiple-flash and dark-room work, the new device makes an important appeal to users of cine-equipment. It can serve as a high-low control for Photofloods, and as a remote-control to switch Photofloods or spotlights on and from camera position. In addition, it will automatically turn one light on as another is turned off: thus it can serve in projection as an automatic control to turn off the room lights as the projector is switched on, or vice-versa. The device sells for $6.95.

Controlling Color

(Continued from Page 263)

versally recognized as the color of purity. Another, when she found herself losing her husband, was black, which suggested not alone sadness, but also formed a subtle contrast with the more brilliant costumes of Doña Sol. Yet another, worn during two of her most important sequences, was blue—recognized for ages as symbolic of "true blue" constancy and faithfulness.

Doña Sol, (Rita Hayworth) on the other hand, was throughout the patrician seductress. She made her first appearance in a neatly-tailored suit of purple—the patrician color, as evidenced by the phrase, "born to the purple." Later, increasing use was made of more vivid colorings in her costume. In the sequence at the dinner where she first ensnares Gallardo, she is first seen in a white evening gown. Later, as she sings to him, playing the guitar, a close-up of her fingers highlights the scarlet paint on her nimbly-flying finger-tips. In another scene, where she and Tyrone Power play their most passionate love-scene, we see her in a close-up, after which the camera dollies back to reveal the flaming orange bodice she wears, as her scarlet-tipped fingers entwine themselves in Power's black hair. (The combination of red and black has always been symbolic of danger—passion—and evil menace.) This costume, incidentally, forms an effectively dramatic contrast with the simple black dress worn by Linda Darnell when she enters the scene later.

Power himself—always the "Spanish beggar" at heart, is dominantly costumed in various shades of brown, with of course the inevitable exception of his matador costumes which in the various sequences include blue-and-gold in the first bull-fight and finally a pure white outfit in the last, avoiding any reds except in the inevitable and necessary cape, with which he plays the bull.

His mother—Nazimova—is throughout the dominant note of tragic foreboding: she is seen mostly in funereal black and grays, and once in burnt terra-cotta. Nacional, too, is always in black save in his ring trappings, for he is the plain man—the primitive, protesting always against the life of the bull-ring.

Coordinating these concepts with the detail requirements of motion pictures was no small task. For a single example, there is the scene in which Juan's wife, knowing already something of her mate's dalliance with Doña Sol, endures the whining complaints of his leech-like sister and brother-in-law for as long as she can, and finally bursting into anger, drives them furiously from the room, after which she has recourse to utterly feminine tears.

As she passively endured the complaints of her sponging relatives, she was clad in a blue costume. But it seemed impossible to me that she—or any actress—could convincingly play a scene requiring a display of passionate rage such as followed, while clad in cold blue. A crimson note—no matter how tiny—would highlight that surge of anger. The problem was solved with a scarf. During the early part of the scene, she kept it rolled in her hand. When her anger finally broke forth and she denounced the hangers-on, I had her unroll the scarf—a natural action for in gesticulating angrily, you might expect her to loosen her grip on it. Finally, as she rushed to the wall, seized a sword, and angrily beat the intruders from the room, the scarf, still in her hand, painted flashing streaks of crimson with every movement.

But then—she must weaken and dissolve in tears. The blue note should now dominate. The crimson of the scarf would again be intrusive. How to get rid of it? First I tried having her toss it on a desk as she turned back into the the room. But there was no guarantee it would be concealed from the camera. Finally I had a small lead weight sewn into the corner of the scarf, and instructed her to toss the scarf on the desk so that the weighted corner fell over the edge. That worked perfectly; the weight whisked the bit of crimson lace out of sight behind the desk, thus effectively removing its now dramatically discordant note of red.

It may seem that these details are affected—unnatural. Well, so, too, are many of the conventions we recognize as important dramatic aids in black-and-white cinematography. For example, suppose our script establishes that a man's wife has left him; he is alone, broken-hearted, and contemplating suicide. Every cinematographer in the world would play such a scene in low-key lighting. Yet in real life, a man might feel those emotions in a brilliantly-lit room—perhaps even amid the gayety and bright lights of a night-club. Yet to get the fullest dramatic effect on the screen, we would do the unnatural thing, and present the scene in low-key cinematography.

Unnatural, yes. But more truly expressive of inner emotion. And that is what we who as directors or as cinematographers are striving to picturize emotions on the screen must do in conveying a visual impression of those emotions, whether we do it in monochrome or in color.

There were many things we did in making "Blood and Sand" which were unnatural. On the set, they looked incredibly artificial. But on the screen, they gave the effect we desired; often they proved more realistic than reality in its literal self.

In this, we had excellent precedent in the methods of innumerable painters from the dawn of time. If El Greco or Velasquez painted a cardinal, or a king, he strove to depict not only a cardinal or a king, but one who typified the regal. The crimson robe was not merely a crimson robe, but a crimson robe which typified the splendor of all imaginable regal habiliments.

In its general impression, that is; If you study such a painting in minute detail, you will see that the painter, to gain his effect, used almost every imaginable color from deepest black through purples, greens, yellows, and so on to create his highlight and shadow effects. We repeatedly strove for similar effects, by similar means. I kept a spray-gun with an unusually wide range of paints constantly standing by on the set, so that we could spray any prop or any costume to get the desired effect. I recall, for example, the way we sprayed a white shirt worn in one scene. It was supposed to be white; but we sprayed it with traces of many other colors—greens and gray-greens, even touches of blue and blue greens. I am sure that most of the people in the studio thought my senses had taken leave of me when they saw what I had done to that shirt. But when we screened the rushes, that shirt took its exactly right place in the scene, and appeared much more real than if it had remained a literal white shirt!

In the same way, in the hospital scene of El Nacional's death, the dominant colors were gray-greens and blues. The studio had provided some excellently authentic hospital accessories — white sheets, a bed and surgical instrument-cases immaculate in white enamel. They would have proved a jarring, discordant note in the scene. But when they were sprayed a dull gray-green, they fitted perfectly—and I am sure none except possibly the most super-critical medico will notice that they are not the regulation white.

In the chapel scenes, we again heightened the mood by spraying the altar-ornaments, the crucifix, and so on, a green like the patina of old bronze. We heightened this hue, which followed out the sombre green-gray of the set, by doing much of the lighting with green filters over the lamps. Of course, in the closer shots, we kept the green light away from the players, though in the longer shots, we let players and set alike show traces of the greenish light. I have not as yet found any people who noticed this artificiality—but I've found many who complimented me and the cinematographers on the emotional feeling of that sequence.

Cutting, too, is something which must be learned all over again in a true color film. In some instances, the fact of color makes for faster cutting; in others, for slower. There can be no general rule, for as in everything else in cinematics, each scene must set its own rules. But things which are of little or no importance in black-and-white becomes vital to either make or break a sequence in color.

For example, I recall that some years ago one of the art-directors at Paramount experimented with sets with red walls. The shade chosen was one which in black-and-white photographed as a pleasing, neutral dark gray. They were used through the whole production. In a Technicolor picture, I would hesitate

Popular Choice in the Hollywood Reporter
Preview Poll

BEST PHOTOGRAPHY

ORSON WELLES'

"CITIZEN KANE"

A MERCURY PRODUCTION
RKO-RADIO RELEASE

GREGG TOLAND, A.S.C.

DIRECTOR OF PHOTOGRAPHY

BERT SHIPHAM, Operative Cameraman
EDDIE GARVIN, Assistant Cameraman

Negative Processing and Dailies by
CONSOLIDATED FILM INDUSTRIES, Hollywood

Eastman *fine-grain* Release Prints by
DE LUXE LABORATORIES, New York

EASTMAN FILMS
BRULATOUR SERVICE

to use such a set for any but the shortest flash.

In "Blood and Sand," we introduced Power, playing Juan as an adult, in this fashion. His cuadrillo is travelling in a fourth-class railway carriage. The other three discuss their progress at some length. His voice is heard offstage. Finally we cut to a full-screen shot of a newspaper, which he is pretending to read. The paper comes down, and we have a big-head close-up of the young matador, reclining in his seat, his head resting against the folds of his brilliant red muletta. In monochrome, we could hold that close-up for almost any footage—one hundred, three hundred, a thousand feet if need be. In color, the emotional impact of that red background is so strong that the shot could only be held for a few seconds. Yet it was necessary: it gave Juan's first appearance the necessary impetus which helped him build and carry his vivid characterization throughout all the ensuing reels.

On the other hand, there are times when color must be cut for far slower tempo that we would do in monochrome to obtain the same, or rather a similar dramatic effect.

All told, controlling color in this manner, for dramatic effect, is a matter of being unnatural—often supremely unnatural, in order to produce psychologically natural *and emotional* visual effects. It is at present a matter of exploring a new medium—trying to learn to express ourselves in a new language. But as we film craftsmen—directors, cinematographers and art directors together—learn how to express ourselves in that new language, I am confident we will discover that we have gained an invaluable new means of expression, both pictorial and dramatic. END

Camera-Guns

(Continued from Page 267)

this is due to the pioneer efforts of the two far-sighted men who first saw the possibilities of the idea, and pushed it on to a successful conclusion—Captain A. E. Nesbitt and Commander Forrest P. Sherman.

How far the camera-gun idea may go cannot of course as yet be disclosed. Suffice it that further improvements are constantly being made in the device and its operation, and that it is doing its part magnificently in making America's aerial gunners more proficient in their work of defending the country from any aerial aggression. In wartime Europe, the camera-gun principle has, so we understand, found a further application under service conditions. In Britain's latest fighting planes, a special camera-gun is interlocked with the ship's real armament, so that each time the pilot fires at an enemy, he automatically makes a picture-record. These pictures, when they show hits, are regarded as conclusive official proof of the downing of an enemy aircraft when no other visual confirmation of the pilot's victory is available. And since in this instance, at least, the camera cannot lie, the camera-gun's evidence, which during the flyer's training period gave theoretical proof of his skill at aerial gunnery, now also gives practical proof of his use of what he has learned! END.

Super-XX

(Continued from Page 269)

ditions, this might be a liability: but in studio camerawork, where lighting is under the absolute control of the director of photography, it becomes an asset. We can much more effectively light to add contrast to an inherently flat film than we can light over-flatly to minimize contrast in an inherently contrasty emulsion.

Moreover, we have found that this technique gives us a considerably wider range of latitude not only in the range of effects possible, but in lighting to obtain those effects. Under modern production conditions, both of these factors are of very practical importance. Obviously, it increases the artistic possibilities of any scene. But having that wider range of latitude is also a vital margin of safety in instances where speed of production is important. It is very nice to talk of precision lighting and of being able to paint our effects with, so to speak, a fine brush instead of a coarse one. It is very pleasant to be able to do so in actuality—when conditions permit. But they do not always permit. On a big set when the overhead charges are mounting up at an appalling rate, or on a more normal set when everyone is straining to maintain or improve upon a none too generous shooting schedule, the broader brush of wider latitude in film and lighting is increasingly desirable.

This is of course particularly evident in making moving-camera shots or in filming action in which the players move extensively around the set. All too often, as all of us realize, a principal player may have to pass unusually close to some lighting unit the beam of which is vitally necessary in some other phase of the action, but which is at that point definitely too intense a light on a person passing close in front of it. In some instances, such units may be rigged on a dimmer and brought down as the player passes by, then restored to the desired intensity. But this technique is not always possible; sometimes, it is not even desirable, as it can easily introduce an obviously artificial note in the effect on the screen.

But if a large part of this compensation can be taken care of by a wider range of latitude in the film, all concerned will benefit. The effect on the screen will be more natural; the production unit can work faster and more efficiently; and the director of photography will have one less source of worry.

The whole matter of using such super-fast films for production camerawork can be summed up by the statement that it restores to the director of photography a much-needed margin of control over the effects he puts on the screen. Contrast, instead of being largely dictated by the inherent characteristics engineered into the film by a factory several thousand miles distant, comes again into the direct control of the man at the camera. If he wants contrast in any or all of his scene, he has the means of putting it there, through his lighting. If he wants soft gradations, he can obtain them, too, without having to sacrifice normal modelling on sets and people to an attempt to counteract inherently high emulsion-contrast. If he wants strictly normal effects, he can obtain them, too.

Certain elementary precautions should of course be observed in making the transition from the so-called "production-type" films to these ultra-fast emulsions. The change is emphatically not one which can be made overnight or with but one or two cursory tests. The specific requirements of lighting this film, not only as regards its inherent characteristics, but in relation to both laboratory processing and the individual cinematographer's own lighting technique, should be very thoroughly understood.

The laboratory treatment given this film is also of particular importance. To get the best results, the laboratory and the cinematographer must work hand in hand. There are some otherwise excellent laboratories where this cooperation seems lacking; frankly, I would hesitate before attempting to use the film under such circumstances.

But where an individual has a reasonable opportunity to familiarize himself with the use of the film, and the necessary mutual understanding between cinematographer and laboratory exists, I am convinced that the use of such super-speed emulsions as "Super-XX" for production camerawork is a positive advantage. Rightly used, it permits the cinematographer to exercise a far greater degree of control over the quality of his work, and to do much of it more easily and more efficiently. It is no wonder, then, that an increasing number of outstanding directors of photography are following Valentine's pioneering lead and successfully taking the unconventional step of using this apparent "special-purpose" film as a production emulsion, to the end that they may put better photography on the screen. And I am confident that as more of us do so, we will find that the film manufacturers, in giving us this emulsion, have given us a much more useful tool than they or we anticipated.

Black-light Flash

Latest in still newspicture-making is the "blackout synchro-flash" used by British newspapers. An oversize Wratten 88-A filter is used over a light-tight flash reflector housing a GE No. 21 Photoflash bulb, and the camera loaded with infra-red sensitive film. With an average exposure of f:5.6 at 1/50th second, satisfactory exposures are made with no visible light at all.

BEHIND THE SCENES

BACK of the arresting beauty of modern screen productions stands the unvarying high quality of Eastman negative films. Each does its specific work surpassingly well. From long experience, directors and cameramen take for granted this vital contribution to each scene's success. Eastman Kodak Company, Rochester, N. Y.

J. E. BRULATOUR, INC., *Distributors*

Fort Lee Chicago Hollywood

PLUS-X

for general studio use

SUPER-XX

when little light is available

BACKGROUND-X

for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS

Photography of the Month

(Continued from Page 273)

sixteenly fine cameraswork. Essentially farce-comedy (complete with an assortment of comedy falls of which Mack Sennett could be proud), "Love Crazy" comes to the screen with the technically smooth and artistically neat visual mounting which has become as much an M-G-M trademark as Leo the lion. Sets and players are presented to consistent advantage, in a straightforward, if not imaginative manner and, especially in the introductory sequence, a pleasing degree of mood and pictorial effectiveness are obtained wherever possible.

All told, "Love Crazy" isn't likely to win anybody an Academy Award, but it is diverting entertainment, presented with the workmanlike photography of which Ray June is so thoroughly a master. But we'll admit we'd like to see him draw another assignment which would give his talents fuller scope—one like his memorable "Arrowsmith," to cite a single example.

MILLION DOLLAR BABY

Warner Brothers' Production

Director of Photography: **Charles Rosher, A.S.C.**

This swift-paced comedy-drama hardly offers director of photography Charles Rosher, A.S.C., opportunities for the kind of camera pictorialism which have in the past put him in the extremely narrow circle of Academy Award winners, but he makes very capable use of what opportunities it affords. The action spreads itself over a rather wide range of settings, from a cheap boarding-house to millionaires' homes and exclusive night-clubs. He handles them all very satisfactorily, and when the occasion arises, achieves pleasing, if minor, pictorial effects.

His treatment of the players is uniformly pleasing; without any opportunity for obvious glamor-photography, he keeps all of them looking very well indeed, in spite of the obvious limitations of the comedy mood. It would seem, however, that camerawork might have heightened Priscilla Lane's transition from a shopgirl to a Fifth Avenue debutante upon whom, as the dialog is at pains to point out, the services of hairdressers, couturiers, tutors, and every conceivable glamorizing influence had for months been lavished, had her earlier sequences given her at least a slightly less attractive visual presentation. Following this, presenting her, as was done, with some of Rosher's most flattering photographic treatment in the scene of her social debut would have made the transition doubly effective.

The operative camerawork seemed somewhat below par, especially in several instances of poorly-timed focus-changes in follow-focus scenes.

The special-effects work was not credited, but must be assumed to be the work of Byron Haskin, A.S.C., and his capable staff. It is excellent, especially in the film's opening sequence.

IN THE NAVY

Universal Production.

Director of Photography: **Joseph A. Valentine, A.S.C.**

Special Photographic Effects: **John P. Fulton, A.S.C.**

The Abbott and Costello brand of extremely broad comedy hardly makes for pictorial cinematographic opportunities, so the best director of photography Valentine could do on this one was to give it conventional high-key comedy photography. This he does efficiently. But a single sequence offers him anything pictorially: this is the Hawaiian night-effect sequence in which the Andrews sisters swing "Hulu-Ba-Luau." Art director Jack Otterson and his staff provided a really photogenic set for this number, and Valentine's lighting and camera work make it a really beautiful sequence. His choice of camera-angles in some of the other musical numbers—especially the "Gimme Some Skin" one—is often highly effective.

On the other hand, his treatment of the people is by no means on a par with Valentine's usual standard. Especially during the early sequences, leading-lady Claire Dodd's appearance is none too satisfactory, and throughout the picture, the face-tones of the men are not at all consistent. It must be said, however, that certain inescapable technical considerations must have handicapped him. Virtually all of the male players are shown throughout in Naval uniforms, in some sequences wearing the regulation dark blues, and in the concluding sequences, tropical "whites." Keeping faces consistent under such circumstances is unquestionably a problem for both the cinematographer and the make-up artist. Offsetting this is the fact that Valentine has done wonders with the none too photogenic Andrews sisters.

Special-effects work by John Fulton, A.S.C., plays a vital part in making this picture possible. Making a picture dealing with the Navy is none too easy at any time; under the present strained international situation, where for so many reasons the strictest secrecy must be observed, it becomes incredibly difficult. Fulton's use of projected-background process-shots is outstanding. So, too, is film-editor Philip Cahn's skillful intercutting of these and conventional studio-made scenes with highly effective stock-shots of the fleet.

The climax of the picture hinges on a wild comedy sequence in which a battleship apparently runs amuck under the unintended—and blind—piloting of comedian Costello. This is portrayed in a series of commendable miniatures and projection-shots which stand greatly to Fulton's credit. The miniatures are by no means the best of which Fulton is capable, but when it is considered that they were obviously done on a comparatively limited budget (for first-class marine miniatures are both large and costly!) and on a schedule badly crowded by imminent release dates, they deserve commendation indeed.

Vacation Movies

(Continued from Page 275)

For that matter, I've seen vacation movies built around the reactions of some personal household pet taken on the trip. For example, you can build an unusually entertaining movie on the apparent reactions of the family pup on a vacation-trip. Get plenty of close shots of his reactions to the new and different locations. Intercut them with your scenic shots and your shots of what the human members of the party do. Then title your picture as though it were the dog talking—"I was fascinated by all the new scents of the countryside"—"They made me wear a leash in Yosemite"—"I took a dip in the Atlantic, and so did Master and Missy"—"Bobby and I went fishing. I barked at the frogs, but he caught a fine rainbow trout"—and so on.

Try out some of these ideas on this summer's vacation, adapting them to suit the needs of your family and your particular way of spending the summer. And when you come back and edit your films, you'll find a new attitude on the part of the folks you ask to attend your screenings. These "human-interest" touches, intelligently carried out, are what make audiences really like to sit down to a screening of vacation movies!

Kodachrome

(Continued from Page 276)

or shots of people, gives the most generally satisfactory effects: it is near enough a front-light so the overall illumination will be good, and just enough away from it so you'll get nice modelling and an interesting picture.

Cross-lighting and back-lighting are possible in Kodachrome—and often very effective—*if* you remember to expose properly. Take your meter-readings for the shadows, and the highlights will take care of themselves.

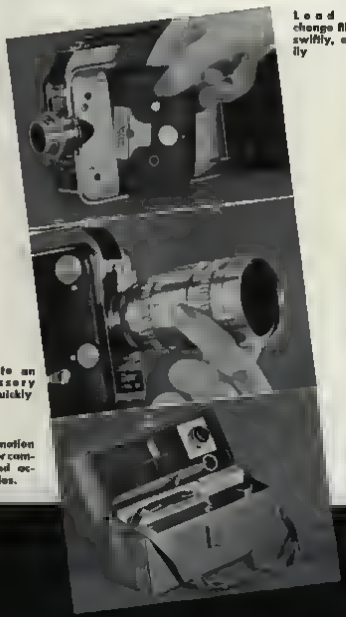
In photographing people outdoors in Kodachrome, I like a soft, even lighting that's free from heavy shadows. As a matter of fact, you'll often get some of your best Kodachrome close-ups on a slightly hazy day, or if you make the shot with your subject under a light shadow.

Composition is a most important thing in making any sort of a color picture, for if there are splotches of strong color in the wrong place, they'll distract attention from the really important parts of the picture. For this reason, be especially careful to avoid unwanted color or action in the background of a Kodachrome shot of a person. And watch the colors in your background! Any strong color in the background can

MAGAZINE *Ciné-Kodak Eight*

. . . the practical precision EIGHT

MAGAZINE CINÉ-KODAK EIGHT is a good deal more than a fine, capable little camera. It is the basis of a new kind of 8 mm. movie making. It brings new freedom; it vastly enlarges the scope of 8 mm. movies.



Load or change films swiftly, easily

Shift to an accessory lens quickly

Combination case for camera and accessories.

Price, with 13 mm. f/1.9 lens, $95

FIRST, as its name indicates, it is a magazine-loading camera. Load it in three seconds, or change from one type of film to another in less than double that time.

SECOND, it offers you a choice of four useful camera speeds. The regular model (Model 90) has frame-per-second speeds of 16, 24, 32, and—for true "slow motion" effects—64. The new Model 90-A (otherwise identical) offers speeds of 8, 16, 24, and 32 f.p.s.

THIRD, it may be fitted with any of seven accessory lenses, ranging from a 9 mm. wide-angle lens to a 76 mm. (3 inch) telephoto. And the enclosed view finder is easily, accurately adapted to give you the field for each. The standard lens is the Kodak Anastigmat 13 mm. *f*/1.9.

FOURTH, it may be fitted with other supplementary lenses and lens extension tubes for extremely narrow field work. And there's an accessory Focusing Finder with which accurate focus can be determined with any of the usable lenses.

FIFTH, there are cases available which carry not only the camera but a variety of the accessories which advanced movie makers require.

And to realize the full quality and beauty of movies made with the Magazine Eight, there's the Kodascope Eight-70.

Look at a Magazine Ciné-Kodak Eight at your dealer's. Be critical about it. We think you'll like it.

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

be disturbing, but I think the most eye-catching are strong reds and blues. They'll pull attention away from even the best close-up of the prettiest girl!

In the same way, keep an eye out to avoid unwanted horizontal lines close to the top of your frame. All too often a line like this, such as may be made by a railing, part of a roof, or the like, can give an audience an unpleasant feeling that perhaps your picture is a trifle out-of-frame.

Reflected color is another thing that can be a disturbing factor, especially in Kodachroming people. Very often you won't be visually conscious of it when making your scene, but the film can pick up surprising reflections in color from nearby colored objects. For instance, if you photograph a girl near a red barn, even though the barn doesn't show in the picture, her face and her clothes, too, if they're light-colored, may very well pick up a surprising amount of red reflected light from that strongly-illuminated red area. I've seen color-shots in which a girl's face picked up a blue tinge from similar color-reflection, or even a greenish tinge from strongly sun-lit green foliage.

Filtering in Kodachrome is simple. Unless you're one of the people who like to use Type A Kodachrome, with its daylight-corrective filter outdoors, there are only two filters that can be of much use in outdoor Kodachroming. These are the Kodachrome haze filter, which is often useful when making extreme long-shot landscapes or working in the mountains, for eliminating minor atmospheric haze and cutting down the excess blue of distance, and the pola-screen. My personal preference is in most cases for the pola-screen. This is excellent to use in penetrating haze—often far better than the haze filter. It is also excellent for darkening blue sky or water for special pictorial effects.

If for any reason you want to make night-effect exteriors in Kodachrome, it's easy. Just use Type A film *without* its daylight filter—and underexpose.

In general, I've found that the simplest and most straightforward technique in Kodachrome is usually the best. Keep your lighting simple, and your exposure full, always exposing for the shadows. Watch your composition for unwanted movement and splashes of strong colors in the background, if you don't want attention distracted from foreground action. Be on the lookout, too, for anything that might give embarrassing color-reflections on close shots of people. Then your Kodachrome shots are likely to be uniformly successful!

Camera-Angles

(Continued from Page 277)

move in closer still, to close-ups. This shows in the utmost detail *what* the people are doing. It may be a close-up of the face of some person, showing his or her reaction to the rest of the action (and in professional sound-films, dialog.) It may be a close-up of some operation, showing clearly just *how* it is being done.

But in any event, this gives us a natural progression from the broad view of the picture to the most important detail. It is exactly the impression you'd get walking into that room or scene. First, as you initially saw it, you'd get the broad, long-shot view. Then, as you came closer, you'd make out who the people were—the medium-shot angle. Finally, as you approached to conversational range, you'd get close-up views of the people's faces, or of what they were doing.

This is a most important thing to remember in movie-making, for after all, the audience can only see the scene or action through your camera's lens, and if you keep them to long-shot angles, they'll miss the really important details of who the people are and what they're doing.

In professional pictures, the use of close-ups can be overdone; it has been, often enough, in films in which some all-powerful star insisted that she be given close-ups in every sequence, whether her action deserved them or not. But the reverse is true in amateur movies. I don't think there has ever been an amateur movie which had too many close-ups; most of them don't have enough. Remember, when you're making any sort of a movie—and particularly your vacation films, upon which there can usually be no retakes—to get plenty of close-ups. They can always be cut out if you find any of them aren't needed; but to want a close-up and find you haven't it leaves a bad gap in the continuity of any sort of film.

And remember, by the way, that this is doubly important in Kodachrome. Even in 16mm. the definition of Kodachrome long-shots leaves something to be desired. On the other hand, and especially with focusing-mount lenses, Kodachrome is at its best in close shots.

Incidentally, in shooting close-ups, it isn't a bad idea at all to follow the professional's example of using a long-focus lens for such shots. Almost always, the face of the person being close-upped is the most important part of the picture. The background is relatively unimportant; often, too much detail in the background is definitely undesirable. And the simplest way to subordinate the background to the face in a close up is to use a long-focus lens which has less depth of field, and accordingly throws the background out of focus, leaving it often only a soft blur.

The professional's standard lens is the 50mm. objective. Therefore he shoots most of his close-ups with the 75mm. (three-inch) or with a 4-inch lens. In 16mm., the standard lens is a 25mm. or 1-inch lens. If you have a telephoto available, shoot your close-ups with it, especially if it is a 2-inch or 3-inch objective. In 8mm., where a 12.5mm (½-inch) lens is standard, use a 1-inch or 1½-inch (35mm.) tele-lens. At all times, you'll find the perspective in such shots improved; and on interiors, where you'll be working the lens at full aperture, you'll find the softened background an advantage. Working outdoors, where the brighter light requires a smaller aperture, this asset disappears, but you can bring it at least partially back by using a heavy neutral-density filter to permit using a larger stop.

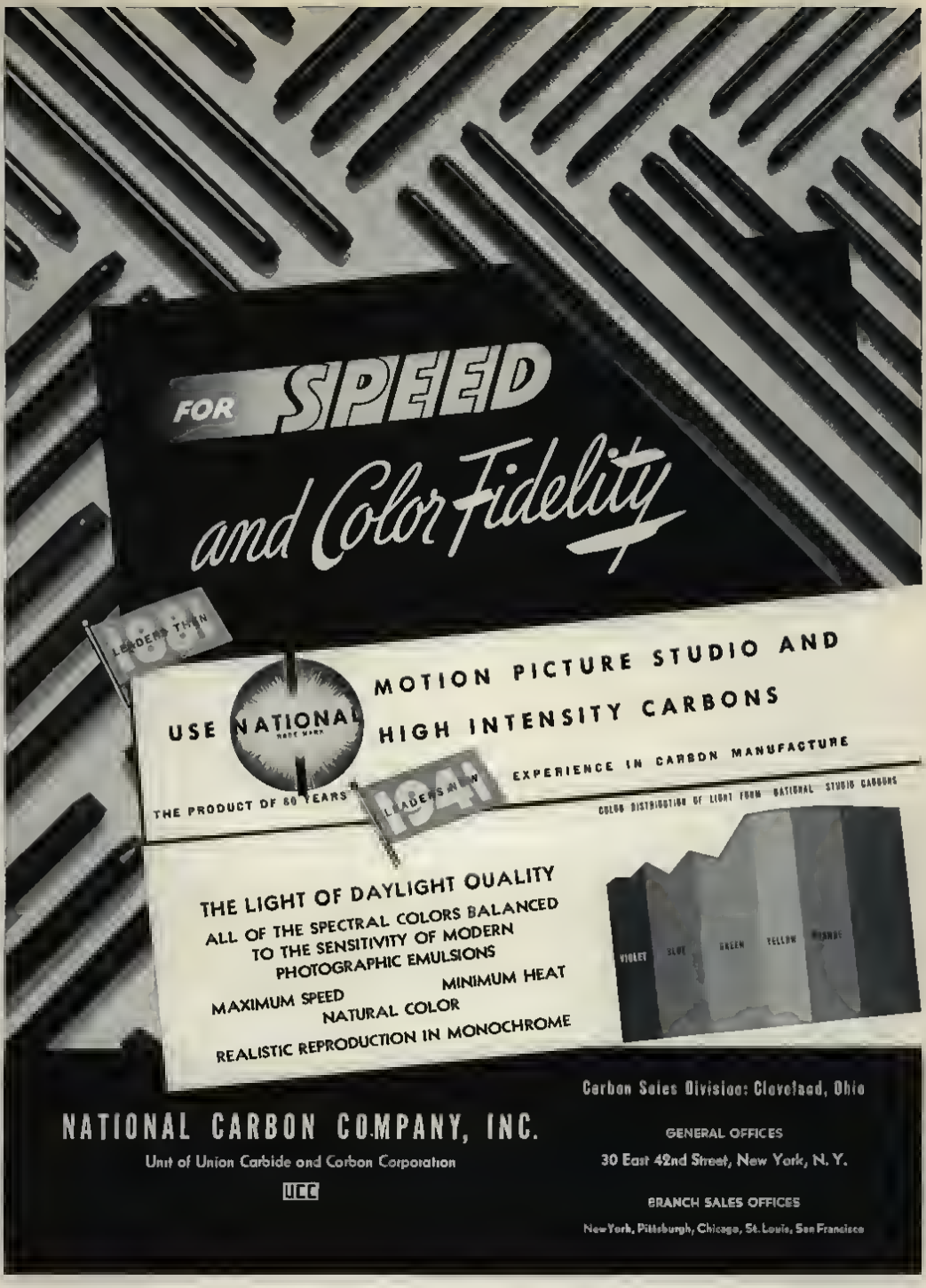
There's another aspect to camera-angles, too. Ordinarily, the most satisfactory height for your camera's lens is one pretty close to a normal eye-level; this gives a normal perspective on the scene being filmed. But sometimes you can go above or below this to advantage. For example, if you have a tall, thin subject, you can often minimize the effect of height by shooting from a camera-position just slightly higher than normal. Such an angle tends, by the way, to make a girl appear petite on the screen. And conversely, if you have a slightly short subject, you can often make him or her appear taller by shooting just slightly upward. This latter, though, calls for guarded use. If your subject's face is the least bit inclined to fullness, such an angle will make the face appear undesirably round; and what it will do to a lantern jaw can be imagined!

Where there are two people in a scene together, and you want to equalize a disparity in height, you can, as they say in the studios, "cheat" a bit. For example, suppose you have a tall man and a short girl, and want to show them together without giving too much of a Mutt and Jeff impression. In a two-shot you can quite easily have the shorter person placed several inches—even a foot—closer to the camera than the taller one. Since the camera's vision is one-eyed, this can do a surprising lot to equalize their heights before the trick becomes apparent. Of course, in apparently looking at each other, they, too, will have to "cheat," looking actually past each other, instead of directly at each other!

For most closer shots, there's another trick. You don't show their feet—so you can have the taller person stand there shoeless, while the short one stands, if need be, on a low platform or footstool. You'd be surprised how many professional leading men there are who have had to play their love-scenes standing on such "lifts" to make them seem somewhere nearly of masculine height while playing with a leading woman who in reality towers inches over them!

Some of these angles have an important psychological effect, too. Looking up at a person makes him seem bigger, more dominant; looking down at him makes him seem not only smaller, but definitely less commanding—the underdog, so to speak. In the same way, if you want to show an object—say the Empire State building—as an impressive creation, shoot up at it. If you want to make it relatively insignificant, shoot down at it.

Similarly, the closer the camera gets to any moving object, the faster it seems to move. In a long-shot, even the fastest-


FOR SPEED
and Color Fidelity
LEADERS THEN
1901
USE NATIONAL MOTION PICTURE STUDIO AND
HIGH INTENSITY CARBONS
THE PRODUCT OF 60 YEARS' EXPERIENCE IN CARBON MANUFACTURE
LEADERS NOW
1941
COLOR DISTRIBUTION OF LIGHT FROM NATIONAL STUDIO CARBONS
VIOLET
BLUE
GREEN
YELLOW
ORANGE
THE LIGHT OF DAYLIGHT QUALITY
ALL OF THE SPECTRAL COLORS BALANCED
TO THE SENSITIVITY OF MODERN
PHOTOGRAPHIC EMULSIONS
MAXIMUM SPEED
MINIMUM HEAT
NATURAL COLOR
REALISTIC REPRODUCTION IN MONOCHROME
Carbon Sales Division: Cleveland, Ohio
NATIONAL CARBON COMPANY, INC.
Unit of Union Carbide and Carbon Corporation
UCC
GENERAL OFFICES
30 East 42nd Street, New York, N. Y.
BRANCH SALES OFFICES
New York, Pittsburgh, Chicago, St. Louis, San Francisco

moving streamliner seems to be crawling; in a close-up, even a relatively slow-moving object seems moving fast, simply because more movement is apparent on the screen. And perhaps the most striking of all ways to convey movement is to pick a low camera-angle, and them have the movement, whether of a person or object, approaching the camera either diagonally or straight on. In such a shot, the movement across the screen is fast, and at the same time the moving subject visibly increases in size, seeming almost to explode off the screen The movement is so dramatically conveyed it has an almost physical impact on the audience.

Yes, you can put camera-angles to work for you, whether they're the simple long-shot-medium-shot-close-up sequence, or the trickier and more intricate angle-shots usually associated with the phrase. The chief thing to remember is that the lens of the camera represents the eye of the audience—and in controlling the angle at which the lens sees a scene or action, you're controlling the way the audience will see it, and the literal and mental impression that scene will make upon the audience. But remember, there's gnt to be a good, logical reason for every camera-angle—it must show the audience something more clearly than it could be seen from any other camera-viewpoint. This is doubly the case with odd and unusual camera-angles, for if it doesn't show things more graphically, there's no real reason for the shot And in the case of "arty" slantwise angles, remember that if the angle doesn't give your audience a better or more forceful view of things, it isn't adding anything to your picture except an impression that your camera wasn't on the level! END.

Scenario

(Continued from Page 279)

Scene 17. Close-up of clock—6.30.

Scene 18 Long-shot—inside front door. Mother opens door. John enters, corsage in hand. She welcomes him and speaks.

TITLE:
"EDITH WILL BE READY IN A MINUTE"

Scene 19. Medium long-shot—John seats himself on living-room couch, corsage still in his hands. He looks at the flowers.

Scene 20. Close-up of corsage.

Scene 21. Medium-shot—Edith is manicuring her nails. She looks down with a horrified expression.

Scene 22. Close-up—Edith's hand moves down her leg—yes, there's a run in her stocking!

Scene 23. Close-up of clock—7:30.

Scene 24. Close-up of John's foot, tapping nervously.

Scene 25. Close-up of Edith, finishing her manicure.

Scene 26. Long-shot—John pulls tickets out of his pocket, looks at them, then tears them up and throws the pieces away.

Scene 27. Close-up of clock—8.30

Scene 28 Long-shot—Edith enters. John rises to greet her She speaks

TITLE:
"I'M READY!"

Scene 29. Long-shot—same as Scene 28 John hands her the corsage

Scene 30. Close-up of corsage, badly wilted.

Scene 31. Long-shot—same as Scene 29 Edith looks at the wilted flowers, and tosses them disgustedly on the table John and Edith exit

Scene 32. Two-shot—John and Edith in car. Night-effect. Car rocks as though it were moving. Edith speaks.

TITLE:
"NO DINNER—I'M DIETING"

Scene 33. Long-shot — drive-in stand, night.

Scene 34 Medium-shot — from outside car A "car-hop" is at one side. John leans out and holds out hand, one finger up. He speaks.

TITLE:
"ONE HAMBURGER—WITHOUT"

Scenes 35-40. Double-exposure — night shots of theatre signs with close-up of Edith shaking her head.

Scene 41. Long-shot—night, of sign of swanky and expensive night-club (I used Earl Carroll's celebrated theatre-night club for this.)

Scene 42. (May be double-exposed on Scene 41 if desired.) Close-up of Edith, nodding her head in high approval.

Scene 43 Two-shot inside car, night-effect—John pulls out pocket-book and opens it.

Scene 44. Close-up, pocket-book—There are only two dollars in it.

Scene 45. Same as Scene 43 — John shakes head. Obviously, he can't afford the ritzy night-spot.

Scene 46. Close-shot of wheels of car coming to a stop.

Scene 47. Close-up—John puts a stick into gas-tank. It's empty!

Scene 48. Close-up, night-effect—John's feet and legs walk past camera to right.

Scene 49 Close-up—John pours a can of gasoline into tank of car.

Scene 50. Close-up of clock—12.30

Scene 51. Medium-long shot, night — John holds car-door open and Edith gets out. They walk toward and past camera.

Scene 52. Two-shot — John and Edith standing at door. Edith's lips say "good night." John tries to kiss her. She slaps his face and quickly goes in door.

Scene 53. Close-up of John—He holds up his hand and speaks.

TITLE:
"NEVER AGAIN!"

Scene 54 Same as Scene 53—John, hand upraised, is still speaking. FADE OUT.

TITLE:
THE END

Offices of J. H. Dallmeyer, Ltd, the British lens-makers, have been moved to 124 Rickmansworth Road, Watford, Hertfordshire.

Home Movie Previews

(Continued from Page 283)

have found the most effective angle from which to shoot a parade is such that it comes diagonally into the picture, moving from left to right. Ward has done this. The only improvement in this respect would be to suggest that wherever it is at all possible, the ideal angle from which to photograph a parade is from a second-story window or balcony, shooting down on the parade from a point at which the marchers enter the picture at the left and then make a turn when directly in front of the lens, thus giving a variety of angles on each float with a minimum of camera-movement. This, however, is rather difficult for any individual in filming an event like Pasadena's Rose Parade, which may be attended by a crowd numbering close to a million spectators.

Ward's lighting and exposure are uniformly good. His follow-shots of such characteristic (and generally photogenic!) features of the parade as the many drum majorettes, could be considerably improved, however. Especially as the subject comes closer to the lens, he appears to overlook the factor of finder parallax, and as a result the figure is not properly centered. In addition, at times he appears to have some difficulty in deciding whether or not to follow such a subject. Some of the angle-shots on the bands are commendable, though they should have been varied, and cut shorter for best effect.

Slightly closer cutting would help the picture quite a bit. This is especially noticeable in some shots of misbehaving horses, and in general in shots of mounted paraders when they come so close to the lens that the screen is filled with the legs of their mounts. The continuity is satisfactory for a film of this type.

In so far as describing the highlights of the parade—the various prize-winning floats, etc.—the titling is adequate. It is unfortunate, however, that black-and-white titles were used in a Kodachrome picture. Also, in the double-exposed opening title, the way the camera pans around the background—a Rose Parade program—is most unfortunate, as this movement in the background distracts attention from the message of the title-wording. The same background, without movement, would be much more effective.

Double "Take"

Britain's Photographic Trade Bulletin tells of an unarmed R.A.F pilot who captured 60 Italians — with a miniature camera. Taking a tip from Hollywood gangster movies, he used the minicam, concealed in his jacket pocket, to simulate a pistol, to persuade the enemy, found in a cave near Tobruk, to surrender. They did.

AT LAST

AMERICA'S GREATEST PHOTO PICTURE MONTHLY!

A REALITY!

Don't Miss the Big, Exciting First Issue

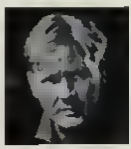
124 Pages of the Finest Pictures and Articles by World-Famous Photographers • Including News, Pictorial, Technical and Equipment Features For Every Amateur and Professional.

SEE

"10 WAR BIRDS A MONTH" By Stewart Love

Though good picture stories on warplanes are scarce as han's teeth, U. S. CAMERA for July presents a corker by Stewart Love. Newsman Love's dramatic pictures of the Buffalo, N. Y., Curtis airplane plant are great photography—and a great photo-news feature for every American. (P. S. And a great lesson in photo-news reporting!)

CHAS. KERLEE'S "Pictures With a Purpose"



17 information-packed pages by Charles Kerlee on the working problems faced by everyone who wants to make his camera pay. Kerlee explores each of his pictures and describes its creation so clearly that the box-brownie fan or the advanced professional will find this article of educational interest. Reprinted from Kerlee's current photographic best seller, "Pictures With a Purpose," published by Cameracraft Publishing Co.

TVA's CHIEF PHOTOGRAPHER CHARLES KRUTCH

When the Government wanted to show taxpayers how their money was spent on T. V. A., Charles Krutch went to work with his camera. His fine photographic survey explained T. V. A. so well to John Q. Public that the Museum of Modern Art hung Krutch's pictures as a work of art.

JAMES KEEN American Ace

James Keen was practically born with a camera in his hands. One secret of his success is to wait until the other photographers have gone—then Keen gets the exclusive he wants. Newsmen still talk about Keen's "Madonna of the Flood." Read his life story and the way he makes prize-winning pictures in U. S. CAMERA for July.

Other Features in July Issue

- "LADY WRESTLERS ARE FUN TO PHOTOGRAPH"
- "PHOTO CARTOONIST PLAYS NAZIS"
- "THE FILMING OF CITIZEN KANE"
- "BRYANT PARK, N. Y."—a photo essay
- "HOW AMATEURS CAN TAKE X-RAY PHOTOS"

and many other articles on the technique of still and motion photography.

★ ONLY $1.50 ★

FOR 12 ISSUES

BEGIN SUBSCRIPTION WITH FIRST ISSUE! SEND COUPON BELOW.

U. S. Camera Publishing Corp.
122 East 42d Street
New York, New York

Please enter my subscription to U. S. CAMERA Monthly for ____ years, ($1.50 for 1 year, $2.50 for 2 years) and begin my subscription with first issue. Attached please find my check ____, money order ____ – Please bill me with first issue ____

Name ____

Address ____

City ____ State ____

DON'T MISS A SINGLE ISSUE!

Tripods and Panning

(Continued from Page 278)

Speaking generally, I think it is pretty generally accepted that it's best to pan from left to right whenever possible, and in making vertical pans (or tilts) to do it in an upward direction. But the action photographed determines this; sometimes you've simply got to do it the opposite way. But try always (with perhaps the single exception of upward pans on waterfalls) to pan *with*, rather than *against* movement in your subject. And never allow yourself to pan indecisively back and forth, up, down and around a scene!

There's another little factor which often causes trouble in home-movie panning. This is grasping the pan-handle too tightly. In driving a car or flying an airplane we're taught to avoid this death-grip on the wheel, but instead to hold it loosely but firmly, with relaxed muscles and nerves. If we use the death-grip on the camera's pan-handle, we find we lose the ability to control things precisely in exactly the same way.

Making "follow-shots" of fast-moving action is another stumbling-block to many an amateur. Yet it is surprisingly easy once you've learned the trick. It's just a matter of letting the camera move freely and smoothly, and keeping the subject accurately centered in the finder.

A pair of engraved cross-lines on the finder—a horizontal one and a vertical one, intersecting at the exact center of the field—are a big help in this. If you simply keep your moving subject accurately centered where those two lines meet, you'll find your follow-shot will be smooth on the screen. But do it smoothly: don't change either the positioning of your subject in the finder, or the rate at which you pan, or you'll find the subject apparently surging backward and forward in your shot on the screen.

There is some question among the most expert users of substandard cameras as to whether in making fast follow-shots you get the best results using the camera on a tripod, or holding it in your hand. I've seen excellent results put on the screen by both methods, so I'd be inclined to say it depends on which each individual finds personally preferable.

There are times, I'll admit, when the use of a conventional tripod may be inconvenient, or even physically impractical. In these rather rare instances, there are two surprisingly useful substitutes. First and most satisfactory of them is the unipod. This is, as its name hints, a one-legged tripod. The best of them, when folded, look much like a neat walking-stick; but when extended they raise the camera to even a tall man's eye-level. Naturally, they can't be as steady as a tripod, but in an emergency they're surprisingly adequate. The best way to use a unipod is to spread your own legs rather wide and make them take the place of the other two tripod-legs, meanwhile bearing down rather heavily on the unipod, especially if it is being used on grass or earth or some similar surface into which its pointed toe can dig for a firm hold.

The second substitute is one I'd recommend only for an absolute emergency, when no other camera-platform is available. It consists simply of a metal block, fitted at one end with a screw which fits the camera's tripod-socket, and at the other end attached to a length of sturdy chain. Screw the block into the camera, and drop the end of the chain to the ground. Then step on the loose end of the chain with your foot, and bear upward on the camera, to keep the chain taut. It's really surprising to what an extent this will steady a hand-held shot.

In general, use your tripod intelligently, and it will repay you many-fold with better pictures—steadier ones, with smoother and more pleasing pans, which will give your work a more professionally finished appearance, and make them more pleasing to your audience. END

Mountain

(Continued from Page 265)

versed, filming scenes apparently played in the morning hours!

Another advantage of the use of arc illumination for this key source-lighting was the fact that by means of suitable filters, the color of the arc beams could be controlled to produce any desired effect. Used with the straw-colored "Y-1" gelatins commonly used in Technicolor cinematography, the beams of these spotlights are a perfect match for normal daylight. With a slightly heavier warm-toned filter, they can be matched to actual sunlight.

The rest of the foreground lighting was produced with the usual incandescent units, naturally making considerably increased use of "sky pans" suspended directly over the set.

The general balance of the foreground lighting tends to relatively high contrast, to aid in putting over the illusion of depth.

The background, on the other hand, is best lit rather softly. In addition I frequently introduced a slight haze from smoke-pots directly in front of the backings, to convey an impression of the inevitable visual haze which screens the distance in real locations of this nature.

In this way, with the foreground cross-lit and with accentuated contrast, and the background flat-lit and veiled by artificial haze, a surprisingly convincing effect can be produced.

The backings themselves are important. I had the clouds fogged in in such a way that when the backing was lit from the front, a convincing day-effect was obtained, while illuminated from the back, a considerable range of night-effects, from sunsets to highly pictorial moonlit effects were possible.

This use of backings, by the way, solves another of the problems faced otherwise by cinematographers working on bona-fide exterior locations. There are of course some parts of the world—such as the region around Mexico City—where pictorial clouds are the rule virtually every day in the year. But in most places, clouds are an exceedingly irregular exception. you may go out one day and begin a sequence with a background of superbly pictorial clouds, while in continuing the same sequence the next day—or even the same afternoon—you may find the clouds have vanished. This naturally leaves the cinematographer in a quandary, whether to filter his scenes to take advantage of the clouds when

HOLLYWOOD'S
Finest Film Processing
PICTURE and Sound-Track
NEGATIVE—DAILIES—RELEASE-PRINTS
•
Super-quality processing on a volume basis.
Capacity: 100,000 ft. Negative; 100,000 ft.
sound-track; 250,000 ft. print per day.
•
Williams Film Laboratory
1040 N. McCadden Pl., Hollywood

they are available—and run the risk of having intercut scenes which show a cloudless sky—or to go to the opposite extreme of striving to subdue the clouds, only to find them unexpectedly available throughout the entire scheduled shooting period. Whichever you do is likely to be wrong. But when you film the scenes on the stage, and have your clouds made to order on a backing, you can take full advantage of the pictorial enhancement of clouds.

In the same way, the inevitable delays caused by waiting for the right weather on locations is naturally eliminated when, working on the stage, you have your weather and lighting conditions made to order

This is noticeable especially in some of the rain sequences we made for "Sergeant York." We can produce thoroughly convincing rain effects either in or out of the studio now-days. But if we attempt such scenes on any large scale outdoors, there is always likely to be the anachronism of showing our actors in a pelting rain while the sun is obviously shining! As far as foreground action is concerned, this can be minimized by the generous use of overhead canvas screens; but in extreme long-shots, such as those required in "Sergeant York," it is usually impractical to screen off the background, so the sunlit rain repeats itself in the distance, even if it is subdued in the foreground.

Working on the stage, this of course does not hold true, since all of the lighting is controllable. Furthermore, by controlling the illumination on the backing a wide range of stormy day or night cloud-effects can be added to the scene, often visibly enhancing its dramatic mood.

Using this technique, while it unquestionably adds to the magnitude of the lighting problems confronting the director of photography, also adds greatly to the control he can exercise over his picture, and accordingly to the photo-dramatic effects he can put on the screen. It demands definitely increased understanding and cooperation between the director of photography and the art-director as regards the design and lighting of these huge stage-built exterior sets, and between the director of photography and the director as regards the staging of action. But granted such cooperation, I am convinced from my own experience that it is another very useful means of reaching our goal of putting better and more convincing pictures on the screen, with greater efficiency. END.

Karl Struss

(Continued from Page 268)

winner of the very first Academy Award for cinematography. That was back in 1927, and the picture was "Sunrise," upon which Struss and Rosher collaborated. Twice since he has been in the exclusive circle of Academy Award nominees, and this year, judged at least by the rushes of "Aloma"—his first in Technicolor, by the way—he bids fair to be strongly in the running for the coveted "Oscar" yet again.

Struss is one cinematographer whose work has never become typed. With the possible exception of westerns, every conceivable type of feature production has flowed through his camera. He has gone from DeMillian spectacle to out-and-out horror melodramas, followed, perhaps by a Marx brothers' comedy, to say nothing of the task which kept him busy most of last year, bringing Chaplin's "The Great Dictator" to the screen. And for the many years that Mae West was a name to conjure with at the box-office, she showed her professional wisdom by insisting that she be filmed always through the medium of Struss' softly sparkling high-key cinematography.

Right now, he is enthusiastic about color What is more, it and its sponsors like him; he is one of the very few "production" cinematographers qualified, in the opinion of Technicolor's extremely conservative executives, to take complete and unaided charge of filming a Technicolor production.

Speaking about color, Struss makes light of the supposed technical difficulties of the process. To him, they're offset by many advantages. "For example," he points out, "take the matter of mak-

Your Summer **COLOR** *Pictures*

Da-Lite Challenger (Shown Above)

NEED THE GREATER LIGHT REFLECTION OF DA-LITE (Reg. U. S. Pat. Off.) **GLASS-BEADED SCREENS**

Da-Lite's famous Glass-Beaded surface, reflecting maximum light without sparkling or glare, shows all shades—from delicate pastels to brilliant reds, yellows and blues—*with "camera-eye"* fidelity. The Da-Lite Beaded surface is absolutely neutral in character. It makes all pictures, (color and black and white) brighter and clearer and it stays white longer. Ask your dealer for a Da-Lite Glass-Beaded Screen! Write for literature listing new low prices on many sizes!

America's favorite! **The only screen with all of these advanced features; "all-in-one" construction: square tubing in tripod *and* extension support; height instantly adjustable by releasing spring latch (no separate adjustments of case). 12 sizes from 30"x40" to 70"x94" inclusive from $12.50* up.**

"Prices slightly higher on Pacific Coast"

DA-LITE MODEL B—All sizes of this popular hanging screen have been reduced in prices. Now as low as $6.00 *

DA-LITE SCREEN COMPANY

DEPARTMENT 6AC, 2723 NORTH CRAWFORD AVENUE, CHICAGO, ILLINOIS

ing matte-shots. In black-and-white we go to a lot of trouble matting out the unwanted portions of the scene, so that the matte-painting can be double-exposed in later. In Technicolor, we just shoot the scene 'as is,' for Technicolor's printing matrices are made on the optical printer anyway, and printing in the desired matte-painting is a simple part of what is a routine operation to them.

"Lighting in Technicolor can be done with almost the same freedom as in black-and-white, though in a slightly higher key. In some ways, we've an even wider range of tools and effects in color lighting than in monochrome: we have the tremendous range of lamps from the big 170-Amp arc spotlights down to the little Mazda 'baby spots.' And we can play our lightings for color as well as for illumination-contrast. Using the arcs with the straw-colored 'Y-1' gelatins on the high-intensity spotlights, and the Inkies with C-P globes and appropriate daylight-blue filters, we have light of a perfect daylight white. Take the filters off the high-intensity arcs, and we have a steely-blue light that is excellent for moonlight effects. Take the filters off the Inkies, and we have a warm-toned light that is ideal for lamplight and similar effects. Put other filters on any of these lamps, and you have a new projected-color effect. The possibilities are endless.

"As a matter of fact, you can learn things in color—especially as regards filtering your light-sources and using modern arcs—that should stand you in good stead in black-and-white. I know this color picture has given me many ideas I want to try out in black-and-white as soon as I have an opportunity to experiment.

"And there's a point I'd like to bring out strongly. Today, more than ever before, the industry needs photographic experimentation. We have new tools in our hands that open the way to all sorts of valuable new techniques. Coated lenses — super-speed films — improved light-sources—the techniques we can bring over from color to black-and-white properly combined, they can show us many new effects, and new and more efficient methods. But it demands practical experimentation! And under today's production conditions, that calls for increased cooperation between the studios and their cinematographers.

"In the past, we have all of us carried on more or less extensive programs of individual experimenting. Today it has become too costly for an individual to do in 35mm., though many of us still do it in 16mm., in so far, at least, as we can be sure of getting parallel results in standard and substandard film.

"But for the final, clinching proofs, we ought to work under actual studio conditions. That is difficult for an individual today. If he is not under contract to a studio, it is difficult to get the necessary cooperation. If he is under contract, his employers usually regard him as too valuable an asset to waste time in that manner, but keep him going from one production to the next with little, if any time between pictures for experimenting.

"It seems to me that now of all times, the industry would benefit if some centralized plan for phototechnical experimentation could be gotten under way. It might be within some studio organization itself; it might be cooperatively managed between the producers as a group, and the A.S.C. as a group. But I am sure it would pay the industry at large big dividends in better pictures on the screen, and more efficient and economical methods of getting them."

MOTION PICTURE EQUIPMENT

Studio and Laboratory Tested Since 1929

Automatic Developing Machine
Complete in Every Detail
Immediate Delivery

HOLLYWOOD USERS CAN ATTEST MACHINE'S SUPERIORITY — USERS ALL OVER THE WORLD CAN RECOMMEND THIS DEVELOPING MACHINE.

● SENSITESTER ● SOUND RECORDING SYSTEMS

NEW ADDRESS

ART REEVES

1515 Cahuenga Boulevard, Hollywood, Cal., U. S. A.
Cable Address: ARTREEVES

Summer Sports

(Continued from Page 280)

which the white ball stands out well, is preferable.

Don't forget, too, that it's a cinch to make a hole in one—with a camera. Just get a shot of a reasonably good drive, and follow it with an extremely close shot of the ball landing on the green and rolling into the cup. If anyone doubts your word—why, you've got photographic evidence, haven't you?

Tennis is another sport that is best shot from above and behind the players, and using a film that accentuates the tonal contrast between ball and background. If you shoot tennis from the side, you'll either have to go back to such an extreme long-shot angle that the details aren't easily visible, or else you'll have to keep swinging the camera back and forth, producing a most confusing effect on the screen.

In these long-shots, a moderate slow-motion—say 24 or 36 frames per second—is desirable. This will slow the action just enough to make it clearer, without running the film bill too high.

Really close shots of tennis-players aren't too desirable unless you've a subject like Bill Tilden or some other star whose form, revealed in really slow slow-motion, is honestly worth study.

Fishing—now there, at least, your camera is up against it, unless you've got a spectacular fighter like a tuna, swordfish or manta on the hook, and you can count on a bit of aerial work on the part of Mr. Fish. Even then, you can never be sure where—or when—he'll break water. But most of the finny tribe do their fighting pretty well under water, and don't offer very spectacular camera-material. Besides, I've heard some fishermen complain the noise of the camera scared the fish away—! So unless you're a dyed-in-the-wool fisherman, you'd better leave fishing to the fisherman, and save your camera and film for another day's shooting! END.

Football Films 24 Years Old

The nation-wide practice of making 16mm. movies of football games for coaching purposes is commonly supposed to be a recent development. But according to the New York documentary film review, "Film News," they're not so modern. Yale began them in 1916, using the old "safety standard" 28mm. home-movie film until the introduction of 16mm., thereafter switching to the more modern dimensions. Princeton, too, is a pioneer, filming its first game in 1919—beginning appropriately with that season's Princeton-Yale game. Getting back to the present, the sensational "fifth down" episode in last fall's Dartmouth-Cornell game was disclosed via Cornell Coach Snavely's 16mm. movies, which for once lost a game, instead of winning it, for the movie-making mentor.

16mm. BUSINESS MOVIES

Sixteen millimeter commercial filming has long since outgrown the experimental stage and become a legitimate and highly-specialized field of professional cinematography. The technicians in this field stand definitely apart both from the 16mm. amateur and from their 35mm professional fellows. But it has been our experience that these men who are so earnestly striving to build a new field of cinematography welcome comments of a professional and technical nature upon their work, and how it can be improved.

To meet this need, this new department of THE AMERICAN CINEMATOGRAPHER is being inaugurated. We see many 16mm. commercial films in the course of our work, and have almost invariably been asked for frank criticism. We propose to give that criticism written expression here. We will welcome opportunities to review and analyze any such films made by our readers.

TBE EDITOR.

BEHIND THE BALE

Documentary Educational, 907 feet, Kodachrome, Sound.

Presented by Minneapolis Brewing Co. Produced by Paul James Thompson.

"Behind the Bale" is as excellent a commercial-educational film as we have screened in a long time. Technically first-rate, it does not shout its commercial message, yet gets it over effectively none the less in telling the little-known but extremely interesting story of the raising of hops From every viewpoint, "Behind the Bale" can be heartily recommended for almost any kind of showings.

From the technical and production standpoints, "Behind the Bale" has a smoothly professional quality not always seen in 16mm commercial films The continuity flows along uncommonly well; and in view of the audience opposition a film dealing with one of the main ingredients of beer might arouse in some quarters, the film very cleverly begins with an exposition of the agricultural resources of the Pacific Northwest, particularly the Yakima valley. Sequences of the Government's great irrigation and power projects are shown, followed by others dealing with the fruit and other industries of the region. When at last attention is turned to the hop raising industry centered there, it comes naturally as an interesting exposition of another and little-known industry of that fertile region

Thereafter the subject is presented in great detail, to an extent which will give most audiences a new respect for the next glass of beer they drink. Some flaws might, however, be pointed out: the exact function of hops in the production of beer is not pointed out Neither is it made clear until well along in the film's progress what portion of the hop-plant is utilized. The narrator's insistence on the high skill required of workers in every stage of the growing, harvesting and curing of hops is also somewhat overdone.

From the phototechnical standpoint, "Behind the Bale" is excellent. Throughout it shows a highly pleasing pictorial quality which should make the film welcome on its photographic merits alone. Repeatedly there are scenes of spectacular photographic composition. The camera-angles throughout are uncommonly effective, and add greatly to the force of the film.

There are several multiple-exposure and montage sequences which are more than praiseworthy. Regardless of whether they were done in the camera or in an optical printer, they are technically and artistically well handled, and add measurably to the professional air of the film. The visual continuity is smoothly welded together with excellent lap-dissolves, too.

There are a few scenes here and there in which the exposure is not as consistent as might be desired. Some of these were obviously made under unfavorable lighting conditions; others seem to have been made under almost ideal conditions, and the unevenness—tending usually to underexposure—may possibly have occurred in the dupe-printing process.

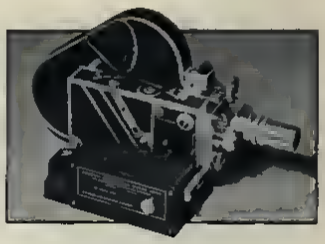
The print viewed was in general quite satisfactory. The color-balance was surprisingly consistent when the intricacies of the Kodachrome process are considered. The contrast was much more nearly normal than is often the case with Kodachrome duplicates. It is unfortunate that no credit is given for the excellent laboratory work.

The sound, credited to Harry A. Zell, is good. Especially in the early sequences, but also at intervals throughout the film, the recording of the narrator's voice could be improved, as it takes on an unpleasantly "tubby" quality. This may conceivably be either the fault of the recording or of the sound processing The musical score—an organ recording—is generally excellent However, the film would benefit if in the re-recording the organ had been subordinated to the announcer's voice In two short sequences, too, the organ seemed a bit ill-chosen to suit the action. In one sequence, a worker is shown in the field with a portable radio; in another, a worker is shown playing a guitar, an instrument which certainly cannot be imitated by any organ. It is unfortunate that this shot could not be replaced by one showing the worker using an accordion, which would, of course, fit better with the organ score.

All told, however, "Behind the Bale" is an unusually creditable production.

Sound on Film
for the
Ciné-Kodak Special

AURICON CINE-SPECIAL 'BLIMP'
Soundproofed enclosure for Cine Kodak Special $195.00



AURICON SOUND DRIVE
Synchronous motor drive for Cine-Kodak Special Camera $125.00

AURICON 16-mm. RECORDER
Variable-area sound on film for double system recording with any synchronous motor driven 16 mm. camera Amplifier with background noise reduction and mixers for combining speech and music Including dynamic microphone instructions and cases for Recorder Amplifier Accessories $695.00

Ask your Dealer, or write today for free descriptive booklet

AURICON *Division,*
E. M. BERNDT CORP.
5515 SUNSET BLVD. HOLLYWOOD CALIF

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

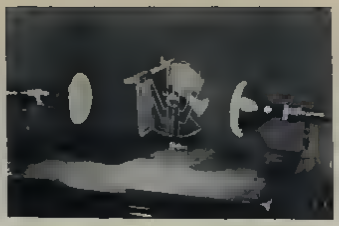
DeJur-Amsco Photo Contest

Over 50 prizes, with a total merchandise worth of $1153.40, are offered by the DeJur-Amsco Corporation in a nation-wide photographic contest which begins July 1st and closes at midnight September 30th. Prizes include such DeJur products as the well-known DeJur "Versatile" enlarger, DeJur-Amsco "Critic" photoelectric exposure-meters, DeJur superimposed-image range finders, and similar accessories, and such other products as Kalart Master Micromatic flash-synchronizers, Albert "Royal" tripods, and innumerable accessories, both singly and in combination.

The contest will be open to every photographic enthusiast in the United States. It is stated that there will be nothing to buy in order to enter, and no strings attached.

Studio For Amateurs

Still and motion picture photographers in the Southern California area will be interested in the opening of the Camera Clinic, in Burbank, Calif. Owned and operated by Rey Scott, International Newsreel cinematographer recently returned from the Chinese war zone, the "Camera Clinic" is said to be a fully-equipped studio in miniature, intended primarily to provide photographic facilities and service for the amateur photographer. Equipment is stated to include Arro rifles, floods, reflector-spots and Baby Keg-Lites with an up-to-date selection of backgrounds and interior settings suitable for all photographic and cinematic needs. A complete darkroom equipped with printers, enlargers, dryers, etc., is at the disposal of still photographers.



Infra-Red Lamps Dry Negatives

A new way of drying negatives, applicable in many instances to cine-film as well, is by the use of infra-red heat energy as supplied by the new "sealed silver" heat-lamp put out by the Wabash Photolamp Corp. This lamp has its own built-in reflecting unit in the form of a solid pure silver lining sealed inside the bulb. This permits concentration of the radiant heat-energy exactly where wanted, and eliminates the need for a separate reflector.

Similar infra-red drying installations have for some time been in use in many industries where the penetrating power of the infra-red radiation speeds the drying of paint, etc., remarkably. For drying still-picture negatives, the wet negative is suspended between two of the heat-lamps placed about two feet apart, as shown in the illustration. An electric fan is then placed behind the negative to send a flow of air across the path of the rays on each side of the film. With this set-up, it is stated that the film will be bone dry within 1½ to 2 minutes.

Similar installations, though necessarily involving more lamps, can be utilized for drying cine-film, whether on developing machines or in drum or rack processing installations. This principle should be of particular value in home processing of cine film, and in laboratories located in regions where humidity is high.

In all, three new Wabash-Birdseye infra-red heat-lamps are announced. In addition to the sealed-silver type, two clear types for use with standard reflectors are available. All are guaranteed for 6,000 hours average life. Bulletin No. 121-B describing the use of infra-red heat lamps generally, can be had by writing the Wabash Photolamp Corp., Brooklyn, N. Y.

In either cinematography or still photography the best course for the beginner is to start with a simple, inexpensive camera and master that. Then he can buy a better, more advanced outfit later when he has gotten the "feel" of picture-making.

* * *

G. B. Equipments, Ltd., the British 16mm. sound-film organization, is adding a number of war films to the Gebescope 16mm. film library.

EVERYTHING PHOTOGRAPHIC
AND CINEMATIC
FOR PROFESSIONAL AND AMATEUR
The World's Largest Variety of Cameras and Projectors. Studio and Laboratory Equipment with Latest Improvements as Used in the Hollywood Studios. New and Used BARGAINS.
Hollywood Camera Exchange
1600 CAHUENGA BOULEVARD
HO 3651 Hollywood, California Cable: Hocamex

LANDERS CAMERA RENTALS
MOTION PICTURE CAMERAS - BLIMPS - DOLLIES
AND ALL ACCESSORIES
PHONE HI-8333
NEW ADDRESS
6373 DELONGPRE AVE.
NEAR IVAR STREET
HOLLYWOOD
Night HE-1311

EASTERN HEADQUARTERS for the CAMERAMAN
RENTALS SALES SERVICE
Professional Studio and Cutting Room Equipment Always Available
BELL & HOWELL — Standard, Hi-Speed, Process and Eyemo Cameras
MITCHELL — Standard, Hi-Speed, Silenced and N.C. Cameras.
WALL — Latest Model Single System Sound Cameras.
WE SPECIALIZE in REPAIR WORK on MITCHELL and BELL & HOWELL CAMERAS
Interlock, Synchronous, Hi-Speed and Variable Speed Motors with Tachometers
FEARLESS BLIMPS—FEARLESS and RABY PANORAM DOLLYS
35mm Double System Recording Equipment
COOKE SPEED PANCHRO and ASTRO PAN TACHAR LENSES, all focal lengths
MOVIOLAS SYNCHRONIZERS REWINDS TRIPODS
FRANK ZUCKER CABLE ADDRESS CINEQUIP
CAMERA EQUIPMENT CO
1600 BROADWAY NYC CIRCLE 6-5060

Telephoto Lenses

(Continued from Page 282)

amazingly inadequate in any except the flattest of front-lights (that is, with the sun very directly behind the camera.) Make or buy yourself an additional sunshade that you can use in addition to whatever shading the lensmaker may have supplied. Have it just as small and as deep as you possibly can without having it cut into your picture. On the 12-inch and longer telephotos I use professionally in aerial cinematography, I use a lens-shade the same size as the mount of the lens—and no less than 4 inches deep; and whenever I can, I rig up additional shading besides! So in using telephotos on 16mm. and 8mm, remember, the more powerful your telephoto, the narrower and deeper your sunshade ought to be

If you give your lens adequate sunshading, you'll eliminate a big part of the flare that flattens out your telephoto shots right there. But in most cases, you'll need a bit more to snap up your shot, especially in black-and-white. So my next suggestion is to use one of the contrast-increasing filters — an orange one, like the Wratten "G," or a red one like the Wratten "23-A," "25-A" or "29-F"—wherever your exposure-conditions (and of course your subject) permit.

And—remember to give your filter just as good a sunshade as you would your lens! There's no point at all in using a deep sunshade if you're going to stick a glass filter out in front of it with little or no protection; the light will just hit that glass surface and bounce around, creating flare just exactly as though you'd no sunshade at all. So make it a point to put your filters close to the lens—the glass part of it—deep within your sunshade

Next, you'll need every bit of added contrast you can get, so try wherever possible to shoot your telephoto shots under conditions that permit stopping down to a really small aperture. Stopping down, you know, tends to increase optical contrast, anyway.

And when you can, pick your lightings for contrast, too. Even in Kodachrome or Technicolor you'll do better in telephoto shots if instead of the conventional flat lighting you use a cross-lighting, with the sun at one side or the other of the camera. In black-and-white, always use a cross-light, or course being sure your sunshade protects lens and filters. Keep your exposure correct; if you have to err, let it be on the side of underexposure, which increases contrast, rather than overexposure, which flattens things out

Finally, be doubly sure that your finder is accurately matched to the field your tele-lens is photographing. With a short-focus lens you can in a pinch get by with a finder that is a trifle inaccurate; but with a tele-lens, your eye looking through the finder and the camera's eye shooting through the lens have simply got to see the same field—or the camera will miss its shot. And with the longer-focus lenses, an error of a fraction of an inch at the camera may mean a difference of several feet in framing a subject 100 yards or so away! Make sure your finder is perfectly matched to the lens, and that it is positioned as close to the lens as possible.

Remember, too, that there are more uses for a telephoto than just giving you a closer view of a distant object. Often, in an otherwise normal shot, you may want to compress your perspective, bringing foreground and background apparently closer together. A telephoto lens will do that. On the other hand, in close shots you may sometimes want to subordinate the background to your subject: used close enough to make the close-up shots desired, and at a relatively wide aperture, the telephoto's proportionately lessened depth of field will do that, too. As a matter of fact, most professional close-ups are shot with longer-focus lenses—usually 3-inch or 4-inch objectives—that give a mild telephoto effect when compered with the 2-inch lenses normally used.

To sum things up, if you use your telephoto with a bit of common-sense, you'll find that successful telephoto-shots can become the rule, rather than the exception. Just remember these basic rules: use a good, solid tripod; have your lens deeply sunshaded; in black-and-white, use an orange or red filter wherever you can; always make telephoto shots at the smallest possible aperture; pick your lightings for contrast—preferably a good, snappy cross-light; and finally, be sure lens and finder are accurately matched And the supposed mystery of telephoto lens work will vanish! END.

16mm. Western

(Continued from Page 281)

have it, seething over this sensation, the Pinkerton man arrivas and proves to be a dead ringer for the card-and-gun artist, so he is promptly slapped into the G. G Bastille. While he languishes there, his assistant (a comic of the Fred Kelsey type) gets chummy with the Sheriff's deputy and, after a bibulous evening in the local beer-hall, (big "production value" here!) staggers back to the Sheriff's office to sleep it off.

There he discovers his chief behind the bars, and frees him. After spending a rather uncomfortable night hiding in the woods, the two detectivas meet up with an old prospector, who givas them a clue that leads them to the real bandit's hide-out. The detective rousts the bandit from his hiding-place, and in the ensuing gun-battle kills him, thusly both vindicating himself and saving the facas of the Sheriff and his deputy. FADE OUT and "End" title, accompanied by sincere sighs of relief from Fallberg and Calonius!

Getting this action on film wasn't as

SOUND for your **HOME MOVIES**
Perfectly synchronized for 8 and 16 mm Fits most popular cameras and projectors Records play on any phonograph 33⅓ or 78 RPM Projector and turntable unit $40 each Write for details of our Syncro-Sound Recording Service
MUSIC CITY
Sunset and Vine Hollywood Calif

8 Enlarged TO 16 Reduced TO 8
Geo. W. Colburn Laboratory
Special Motion Picture Printing
1187 MERCHANDISE MART
CHICAGO

COOKE CINÉ LENSES
help the industry progress ... by meeting today's needs ideally ... by being fully capable of satisfying the future's ever more exacting requirements. Focal lengths for every need. Write for descriptive literature.
BELL & HOWELL
COMPANY
Exclusive World Distributors of Taylor-Hobson Cooke Ciné Lenses
1848 Larchmont Avenue, Chicago
New York: 30 Rockefeller Plaza
Hollywood: 716 N. La Brea Ave.
Washington, D.C.: 1221 G St. NW
London. 13-14 Great Castle St.

RUBY CAMERA EXCHANGE
Rentals—Sales
Exchanges
Everything You Need
FOR THE PRODUCTION
OF MOTION PICTURES
UNDER ONE ROOF
35—16MM.
We Invite Foreign Inquiries
IN BUSINESS SINCE 1910
729 SEVENTH AVE., NEW YORK
CABLE ADDRESS: RUBYCAM

easy as it sounds. Take the matter of locations, for instance Up at Kernville, which is about a hundred mountainous miles away from Hollywood, they've got a stock old-time western street which is rented out to professional movie troupes. We talked the owners into letting us use it at times when Gene Autry and Bill Boyd and the rest weren't shooting there. All told, we—and our cast, which was composed entirely of fellow-workers at the mouse factory—made so many trips up there that even now if we don't keep a close eye on our flivvers, they're likely to start rolling that way by themselves. For other scenes, we journeyed to such familiar professional locations as Idylwild, Chatsworth, and of course, the old stand-by, Griffith Park.

One time our studio connection stood us in good stead was in the matter of making our interior scenes Just about that time, Walt was moving from his old plant in Hollywood to his present place in Burbank, and we wangled permission to shoot our interiors in the little stage at the old plant. But we had to build the sets—there were six of them—strictly ourselves, and provide our own Photoflood lighting equipment for illumination. At that, we (this is Fallberg speaking about cameraman Caloniusl) did a better job of lighting on our interiors than on some of the exterior shots, for we were too raw and green to know anything about using reflectors—and you can imagine the shadow-trouble we had with everyone wearing wide-brimmed cowboy hats!

There were times when we thought we had bitten off more than we could chew For example, we needed a shot of an old-time train in action, some closer shots of our detective and his henchman boarding and leaving it, and interior shots inside the cars. Stock shots were ruled out. We made up our collective mind that if we couldn't personally go out and shoot a scene, we just wouldn't have it in the picture.

Well, in the case of the train, we played in double-headed luck Paramount was sending a genuine old-time train around the country as a publicity stunt to advertise "Union Pacific" (now you can see how long we worked on our epic!) so we found out when it would be leaving We piled into the car and raced out to San Bernardino, and bagged the necessary action shots.

We were just as lucky in the closer shots. One of our fellow-Disneyites, Ward Kimball, had been bitten by the railroad bug and acquired himself a real steam-spouting old-time engine, complete with car to match, which he keeps on a track in his Alhambra orange-grove. We kidded Ward into letting us use his train for our close shots and interiors—and added a lot of "production value" to the picture. That he made us help him lay track on some visits didn't lessen our appreciation of his railroad, either!

But for the most part, we planned the picture within the limitations our standing as novices and amateurs imposed on us. Also within the limits of our spare cash—!

Actually, there were no problems so great as to be insurmountable. Building interior sets was largely a matter of rounding up some old lumber (thank heaven for friends who were building houses!), constructing the necessary walls and "flats," papering them with wallpaper of the 1879 period, rummaging around junk-shops for props of the right character and dressing our sets. Getting the wallpaper was one of the worst problems; everything in that line has gone incredibly modern since 1879, and the way some of the wallpaper merchants looked at us when we asked for some garish old time patterns was enough to discourage any weak-willed individuals!

What might have been another problem turned out to be unexpectedly easy. We needed an 1879 telegraph blank for an insert showing the message that put the Pinkerton men on the case. We thought we'd have to fake one until someone thought of the idea of asking Western Union: and believe it or not, the telegraph company came through with an authentic 1879 blank!

On our exterior locations we sometimes had a bit of trouble finding just the right combination of background, availability of horses, and permission to fire off blank cartridges for our shooting scenes In a case like that, we just held off shooting until we found what we wanted. And that held true for most everything, while we weren't so over-ambitious as to aim for something way over our heads, there was still a certain basic quality we wanted to get into the picture simply as a matter of pride in doing everything the best way we could. Speaking broadly, we don't think we fell down too badly.

As for our actors, we were lucky there, too. Anyone who is sufficiently looney to work successfully in an animated cartoon studio is likely to be willing to try anything once—even acting! So we were able to recruit ourselves a cast of amateur actors from among our daily associates, paying them only an occasional free coke now and then when the going got too tough and hot.

That is, we got volunteers for all the parts except the dual role of the detective and bad man. Maybe some of the prospective heroes peeked at the script and saw that our villain had to do a bunch of falls from horses and so on, and finally do a brodie off a cliff, anyway, they were awfully polite about turning down the part to "someone who could do it better!" Finally (this is Calonius talking) it became very evident that if we wanted the part filled, one of us would have to do it himself. As director-cameraman, I couldn't manage it, so—by dint of superhuman persuasion—Fallberg, whose official duties as producer and film-editor left him some spare time, was coerced into donning grease-paint and a walrus moustache and filling the role He did a bang-up job of both parts . . . Bang down, you mean (this from Fallberg—still rubbing liniment on those bruises earned doing the falls—!)

The picture itself was shot with a Bell & Howell 70-D Filmo with the simplest of universal-focus lenses, and and Eastman Cine-Kodak Special was borrowed for a few dissolves and for the main, credit and end titles, which were filmed in Kodachrome. Most of the dissolves, however, were done as dupes, printed by Pacific Laboratories Cutting these scenes in with the originals naturally threw the emulsion in the dissolved scenes on the wrong side of the film, throwing things in and out of focus in the screen unless you watch the projection like a hawk; but with 1750 feet of picture, we couldn't afford to have the whole thing duped to make this come out even

We completed the production by working out a synchronized musical score on phonograph records, some of them specially recorded All told, we feel we've turned out an effort which, even if it isn't a professional job, is at least something of which we don't have to be too ashamed. And we had a lot of fun doing it—and learned a lot, too. What more could any group of amateurs ask than that? END

There are over 5,000 stores dealing in photographic equipment in Canada About 200 of them specialize exclusively in photo-equipment.

MOVIOLA
FILM EDITING EQUIPMENT
Used in Every Major Studio
Illustrated Literature on request
MOVIOLA CO.
1451 Gordon St Hollywood, Calif

FAXON DEAN
INC.
CAMERAS
BLIMPS-DOLLYS
FOR RENT
Day, NOrmandie 22184
Night, SUnset 2-1271
4516 Sunset Boulevard

Movie Clubs

(Continued from Page 285)

Hollywood and twenty of the members enjoyed demonstrations of all the latest movie equipment and a special talk on "Making Prize-winning Movies" by Editor William Stull, A.S.C., of THE AMERICAN CINEMATOGRAPHER, who screened several of the magazine's prize-winning films.

At the May 21st meeting, A. E. Shore, of Max Factor's make-up studio, gave a demonstration of character make-up. Hugh Heacock, who plays the role of Father Serra in the Mission film now in production by members Val Pope and Harold Neil, was made up to represent three different stages in the character's life. Following the demonstration, Kodachrome pictures of Florida loaned to the Club by Ralph Hommel of Ohio were shown.

In conjunction with the Junior Chamber of Commerce, the Club sponsored a contest for the best movies made of Long Beach's recent bathing beauty parade. Winners in the 8mm. class were President Mildred J. Caldwell, first; Dr. Franz Buerger, second; and Harry E. Ward, Jr., third. In the 16mm. classification the winners were Clarence Aldrich, first; Albert Wright, second; and Miss Florrie Wright, third.

RAYMOND FOSHOLDT, Secretary.

Still-Men Tri-City Guests

The May meeting of the Tri-City Cinema Club (Davenport, Ia., Rock Island and Moline, Ill.) was the third annual get-together meeting between the cine group and the six still-camera clubs of the region. Included in the program were the monthly Print Exhibit and Award of the Moline Camera Club; a showing of 35mm. Kodachrome slides by Robert A. Cross, and the showing of three films by Tri-City members. These included "Milking Time in Spencer Square," 300 feet 16mm black-and-white, by Harold Hamling; "Davenport High School Band in Action," 400 feet, 16mm. color, by Harry Lytle, Dr. James A. Dunn and Dr. Paul A. White; and "Mexico," 200 feet 8mm. color, by Ray O. Schmidt.

DR. ALBERT O. MUELLER President

Joint Meeting of So. Cal. Clubs

The May meeting of the Los Angeles 8mm. Club was devoted to a joint meeting with the various other movie clubs in the Southern California area. Each club provided the outstanding film made by its members during the past year. The program consisted of "Wyoming Sheep's Tails," 400 feet, 16mm., color, by Mrs. Charles L. Zimmerman, and "Las Vegas Shrine Ceremonial," 300 feet, 16mm., color, by President William Hight, as contributions from the Los Angeles Cinema Club; "Father's Time," 400 feet 16mm. black-and-white by Raymond Fosholdt of the Long Beach Cinema Club—an outstanding example of home processing; "Farmer in the Dell," 200 feet 8mm., black-and-white, by Leo Caloia and N. Johnson of the Snicker-Flicker Club of Glendale; "Mammoth Lakes," an outstanding color film by H. L. Carnahan of the La Casa Moviemakers of Alhambra; "Tropical Jamaica," 400 feet 16mm. color, by Carl Anderson of the Southern Cinema Club; "1941 Tournament of Roses," 800 feet 16mm. color cooperatively filmed by the members of the Pasadena Movie Club; and "Diary," 300 feet 8mm color, by Harold Remer of the Los Angeles 8mm. Club.

BETTY BARNEY, Secretary

Philadelphia Goes Balkan

Greece as it was, the Balkans as they used to be, and Mexico as it is today were portrayed in a color-film shown by Mrs. C. Phoburn Maxwell at the May meeting of the Philadelphia Cinema Club. Mrs. Maxwell accompanied the screening of her films by a witty running commentary. The Club was not only very well entertained, but highly flattered by Mrs. Maxwell's request that they criticize her films unreservedly. However, the films were so excellent that little criticism was possible.

B. N. LEVENE, President.

Parkville Discusses Film Latitude

The April meeting of the Parkville, Md., Amateur Cinema Club highlighted a talk by R. C. Surridge on "Films, their Latitude and Exposure," illustrated by slides and pictures. Member Loewer screened his film on the New York World's Fair. Messrs. Surridge, Davidson and Loewer were appointed as a Technical Committee to analyze members' films when shown during meetings.

G. E. ARO, Secretary

FOR SPEED GRAPHIC OWNERS! . . . SUPER SPEEDFLASH SHOTS—are easy with SISTOGUN, made by the makers of the famous Kalart Speed Flash and Range finder. Write for Literature. Dept. XG-8.
THE KALART COMPANY INC.
Taft Bldg Hollywood, Calif.

16MM. ONLY
Negative-Positive film
Machine processed
Kodachrome Duplicates
16 mm. Technique for 16 mm. Films
Rapid Service of the Highest Quality
Poulson Films Laboratory
3505 South Figueroa St.
Los Angeles PR 2634

GOERZ
KINO-HYPAR LENSES
f:2.7 and f:3
For regular and color movies of surprising quality. High chromatic correction . . .

Focal lengths 15mm to 100mm—can be fitted in suitable focusing mounts to Amateur and Professional Movie Cameras.

GOERZ *Reflex* FOCUSER
—Patented—
for 16mm Movie Camera users—voids PARALLAX between finder and lens—provides full-size ground-glass image magnified 10 times. Adaptable to lenses 3" and up. Also useful as extension tube for shorter focus lenses for close-ups. Extensively used in shooting surgical operations, small animal life, etc.

GOERZ *Parallax-Free* FOCUSER and FIELD FINDER CONTROL
for Filmo 121 and Simplex-Pockette, no more off-center pictures, magnifies 4 and 5x.
For Detailed Information Address
Dept. AC-6
C. P. GOERZ AMERICAN OPTICAL CO.
317 E. 34th St., New York, N. Y.
American Lens Makers Since 1899

CAMERA SUPPLY COMPANY
ART REEVES
1515 North Cahuenga Boulevard
HOLLYWOOD Cable Address—Cameras CALIFORNIA
Efficient-Courteous Service New and Used Equipment
Bought—Sold—Rented
Everything Photographic Professional and Amateur

Ham for L. A. Cinema Club

The fasture of the Los Angeles Cinema Club for its April meeting was a contest for a 100-foot reel, to be submitted uncut and unedited. There were a number of films entered in the contest, and the Judges awarded the Grand Prize to Jack Shandler. Shandler's film was in Kodachrome, and featured the internationally known Chef Milani of radio fame, who prepared a ham for baking in an unusual style. From the oven to the dinner table proved an interesting subject to the audience Following the contest pictures, a 1600-ft. film, in Kodachrome, photographed by George Ring, member of the club, of Hawaii, was shown This was an excellently-photographed film The meeting was preceded by dinner at the Chapman Park Hotel.

JACK SHANDLER, Secretary.

San Francisco Announces Contest Rules

Regulations for the 1941 Contest of the Cinema Club of San Francisco are announced in a recent bulletin published by that Club. As they may be of benefit to officers of other clubs, they are republished here. Contest pictures are limited to 400 feet of 16mm., or 200 feet of 8mm, either black-and-white or Kodachrome being eligible. Any member in good standing of the Club may enter the contest, with the exception of those making their living by making or selling motion pictures professionally. In order to have a contest, it is ruled that there must be two or more films entered.

From the contents of the bulletin it appears that during the year there will be five sub-contests, with subjects as follows: A, home and family pictures; B, Nature pictures; C, Fictional and documentary pictures; D, Travel and vacation pictures; and E, Miscellaneous. These sub-contests will be judged by club members. The run-off between the winners of these five sub-contests will be judged by a committee of non-members of the club, preferably representatives of other clubs in the district.

This final judging will be on the following basis: A, Continuity, 20%: 1, Maintenance of interest; 2, Flow of thought; B, Photographic quality, 20%: 1, Exposure; 2, Camera technique; 3, Composition; C, Editing, 20%: 1, Transitions; 2, Tempo. D, Titling: 15%. E, Subect-matter, 15%. F, Lighting, 10%.

The monthly sub-contest winners will receive a leader for their films. The winner of the annual run-off contest will receive possession of the Club's large annual trophy for the ensuing year, and in addition will receive as a permanent award a replica of the camera and tripod that forms the top of the large trophy. Any member who wins the annual trophy three consecutive years, will receive it permanently.

Idea Exchange

(Continued from Page 284)

convenient way to do this to buy one of the small "color-wheel" attachments several manufacturers put out during the early days of home movies; you can usually pick one up for a few cents Take out the colored gelatin from one of the openings, and in its place put a piece of black cardboard or metal. Leave another opening clear. Then mount your gadget so that it fits close up against the projection-lense, and the clear opening normally hangs in front of the lens. A touch of the finger will swing your "douser," and the opaque black cardboard will cut the projector's light from the screen until you're ready to start with the opening title of your picture.

W. G. LEADBETTER

Sievers Weston Representative

The Weston Electrical Instrument Corporation announces the appointment of Edward S Sievers as the firm's Western Representative, succeeding A.A Barbera who has represented Weston for many years. Associated with Sievers will be John D. Farneman, also well-known through his association with Weston in the territory, and an experienced staff Sievers, who has been prominently associated with Weston's activities in Southern California since 1937, will make his headquarters at 567 Subway Terminal Bldg., 417 South Hill Street, Los Angeles.

Here's How

(Continued from Page 286)

Neutral-Density filter, we were enabled to make the shot, with correct exposure, at f/10.

Professionally, the Neutral-Density filters are most frequently used as a means of controlling excessive visual contrast, especially in lighting or subject-matter. For example, working at the beach, the contrast between normal subjects and brightly-illuminated white sand can give an unpleasantly "hard" picture, but by using a Neutral-Density filter the glare from the sand can be materially reduced. The N-D filters can be used in combination with any color-filter. As a matter of fact, two of the most popular professional filters are filters in which a yellowish color-filter and a Neutral-Density filter are made up as a single filter. These are the 3N5, composed of an Aero 1 and a 50 Neutral-Density filter, and the 5N5, made up of an Aero 2 and a 50 N-D The 3N5 gives light color-correction without excessive contrast. It is very generally used for open landscapes, street-scenes and desert or snow scenes. The 5N5 gives moderate color-correction, also without increased contrast. Its action is similar to that of the 3N5 but with added softness and slightly stronger color-correction. It is particularly useful for making snow-scenes or anything in which strong lighting contrast with "hot" highlights and heavy shadows may be encountered

CLASSIFIED ADVERTISING

FOR SALE

THE WORLD'S LARGEST VARIETY OF Studio and Laboratory equipment with latest improvements as used in Hollywood at tremendous savings. New and Used. Mitchell, Bell-Howell, Akeley, De Brie, Eyemo, anicution process cameras, lenses, color magazines, adaptors, lighting equipment silencing blimps, dollies, printers, splicers, moviolas motors, light-testers, gear boxes, synchronizers Guaranteed optically and mechanically perfect. Send for bargain catalogue. Hollywood Camera Exchange. 1600 Cahuenga Blvd., Hollywood, Calif.

NEW, USED, REBUILT STUDIO RECORDING AND LABORATORY EQUIPMENT Cameras, Printers, Splicers, Recorders, Amplifiers, Cable Horses, Moviolas, Interlock Motors Developers, Galvanometers Opticals, Glowlamps, etc. Free Bargain Bulletin. Buy or Trade. S. O. S. Cinema Supply Corporation, New York

ASKANIA 35 MM CAMERA. In addition to regular Astro 2.3 lenses it has a Zoom lens Astro 2.9, complete, fully equipped. Also 12 volt motor friction tripod, cases, etc Real bargain BUBY CAMERA EXCHANGE, 720 Seventh Ave., New York City

35MM SWISS CHRONIC MOVIE CAMERA with visual focus, self-contained 400 ft. magazines, and complete complement of accessories. Write for details. Originally $750 Sacrifice, $185. MOGULL'S, 57 WEST 48TH, NEW YORK CITY

TWO COLOR PROCESS MOTION PICTURE camera. Pilat pins, turret equipped with three sets of matched 45 mm., 50 mm, and 90 mm Zeiss lenses for split beam Complete sets of prisms and filters. Specially suitable for color salvations For quick sale $675 Photographic Instruments Inc., 630 Ninth Ave., New York City Cable address: Photomenta

EYEMO CAMERAS ALWAYS IN STOCK—SALE —RENT, TRADES ACCEPTED 16MM CAMERAS, PROJECTORS, LENSES, ACCESSORIES—DERRIE, DE VRY, BELL & HOWELL —MITCHELL CAMERAS CAMERA MART, INC., 70 W 45th St., New York

WE BUY, SELL AND RENT PROFESSIONAL AND 16mm EQUIPMENT, NEW AND USED. WE ARE DISTRIBUTORS FOR ALL LEADING MANUFACTURERS BUBY CAMERA EXCHANGE, 720 Seventh Ave., New York City Established since 1910.

RARY STUDIO EQUIPMENT CO. BLIMP for Mitchell N. C. or Standard camera. In like new condition, reasonable. Write or wire for details

CAMERA EQUIPMENT COMPANY
1600 Broadway New York City
Telephone Circle 5-6060 Cable: Cinequip

MECHANICAL SERVICES

BELL & HOWELL SILENT PRINTERS CONVERTED INTO 5 WAY SOUND PRINTERS AND COMPLETELY MODERNIZED. Ask for details.

CAMERA EQUIPMENT COMPANY
1600 Broadway, New York City
Telephone Circle 5-6060 Cable, Cinequip

WANTED

WE PAY CASH FOR EVERYTHING PHOTOGRAPHIC Write us today Hollywood Camera Exchange 1600 Cahuenga Blvd., Hollywood.

WANTED TO BUY FOR CASH
CAMERAS AND ACCESSORIES
MITCHELL, B & H, EYEMO, DEBRIE, AKELEY
ALSO LABORATORY AND CUTTING ROOM EQUIPMENT
CAMERA EQUIPMENT COMPANY
1600 BROADWAY, NEW YORK CITY
CABLE CINEQUIP

PRODUCER OF EDUCATIONAL FILMS wants to contact photographers with 16mm. motion picture equipment and experience in making Kodachrome. Black-and-white negative and reversal film to photograph assigned location shots in all parts of the world. In reply state experience, equipment used and territory covered. Must have camera with 24 frames per second tripod and exposure-meter. CORONET PRODUCTIONS, GLENVIEW ILLINOIS

Better Vacation Movies... with a Filmo!

THE movie opportunities of your vacation this summer will probably never be repeated. So prepare now to bring home the finest possible 8mm. movies. How? By getting a Filmo 8, precision-built by the makers of Hollywood's preferred studio equipment to give *professional results with amateur ease.* Choose between these three Filmo 8's:

FILMO "COMPANION" 8

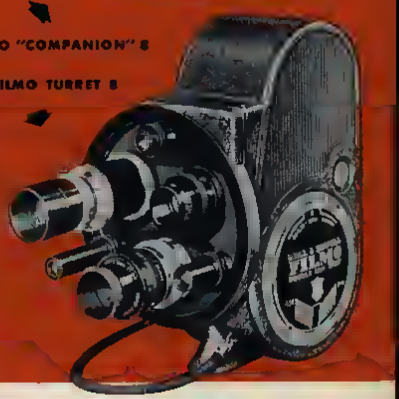
Palm-size; weighs only 24 ounces. Film, color or black-and-white, drops into place—no sprockets to thread. Operates at 8, 16, 24, and 32 frames per second. Has single-frame control for animated cartoons. Standard 12½mm. F 3.5 lens is instantly interchangeable with extra speed and telephoto lenses, for which matching viewfinder masks are provided. Built-in exposure calculator covers every outdoor photographic condition. Only $49.50.

FILMO "SPORTSTER" 8

As small and light as the "Companion," "Sportster" offers the same advantages *plus* the following important features. Operating speeds are 16, 32, 48, and 64 (slow motion), plus single-frame exposure control. The lens is the fine Taylor-Hobson 12½mm. F 2.5, twice as fast as an F 3.5. The film footage indicator is *automatically* reset. Streamlined housing; colorful, embossed exposure calculator. Price recently reduced to $69.50.

FILMO TURRET 8

Brings complete, instant readiness for all picture opportunities. The turret head mounts three lenses *and* their matching viewfinder objectives, so that the finder is *always* matched to the lens you're using. Has four speeds including slow motion, single-frame control, positive-type finder, and automatically reset film footage dial. With one lens—the fine, fast Taylor-Hobson F 2.5—now only $109.50. Or, with critical focuser, $126.



MAKE YOUR CAMERA MORE VERSATILE WITH Filmo Accessories

B&H TRIPODS

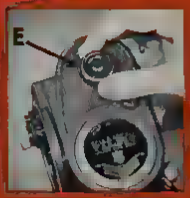
The use of a Tripod is required for steady pictures and for smooth, even pans and tilts. See B&H All-Metal and Filmo Tru-Pan Tripods at your dealer's. Note their rigidity and the smooth action of their precision-built heads. Full 90° tilt. Prices start at $18.75.

B&H FILTERS

Authentic gelatin glass filters for monochrome work, and haze filters for Kodachrome, mounted for easy attachment to Filmo lenses. B&H Filters are *permanent* because they're made of *dyed optical glass*, not of gelatine. Priced from $2.50, depending upon lens to be fitted.

FILMO FADER & WIPE DISC

Permit making dissolved fade-outs, wipe-outs and wipe-offs from any direction, and (if camera is equipped with a film rewind) lap dissolves as well. Spring driven, fully automatic. Indicator visible in finder permits using without tripod. With Wipe Disc, $17.50.



REWINDING ATTACHMENT

Permits making dissolves and double exposures. Available for any Filmo 8 as original equipment or as a subsequent factory adaptation. The latter on single-lens 8, $34.50; on Turret 8, $37. When ordered as original equipment, each price is $5 less.

See Your Filmo at Their Best with a Filmo 8mm. Projector

To enjoy superb projection, and to give your often irreplaceable 8mm. films full protection, use a Filmo Projector. Camera-matched film registering mechanism prevents visible frame line. Filmo-Master 8, with 200-foot film capacity, now only $99.50. Filmo-Master "400" (above), with 400-foot capacity, $112.50. Prices cover projector *complete* with lens, lamp, reel, and case. Bell & Howell Co., Chicago, New York, Hollywood, Washington, D.C., London. *Est.* 1907.

DIRECT FOCUSER

For Filmo Auto-Load Auto Master and 141 Cameras. Slips into camera in place of the film magazine and permits composing through any lens. Eliminates parallax entirely. Image on ground glass is upright and magnified ten times. Price, $17.50.

CASES FOR ALL FILMO CAMERAS

If your original Filmo case fails to accommodate the accessories you've acquired, or if it has become scarred from long use, why not get a new case for your vacation trip? Whatever Filmo Camera model you use, your dealer offers a fine selection of cases of various capacities, all bearing the B&H brand which is your guarantee of fine, genuine leathers.

BELL & HOWELL COMPANY
1845 Larchmont Ave., Chicago, Ill.

Please send complete information about ( ) Filmo 8mm. Cameras; ( ) Filmo 8mm. Projectors; ( ) Filmo Accessories.

Name.....

Address.....

City..... State.....

AC 8-41

PRECISION-MADE BY Bell & Howell

SATISFIED MITCHELL CAMERA USERS

I have been using Mitchell Cameras since 1920

and in my opinion the new

MITCHELL STUDIO CAMERA

is perfect.

SOL POLITO, A.S.C.

Mitchell MOTION PICTURE *Cameras*

Agencies

MOTION PICTURE CAMERA SUPPLY CO — New York City
D NAGASE & CO LTD. — Osaka Japan
FAZALBHOY, LTD. . . . Bombay India
H NASSIBIAN . . . . . Cairo Egypt

Cable Address MITCAMCO

Phone CRestview 6-1051

MITCHELL CAMERA CORPORATION

665 NO. ROBERTSON BLVD. WEST HOLLYWOOD, CALIF.